



TECHNICAL AND ADVISORY SERVICES • ENVIRONMENTAL HEALTH AND SAFETY
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Bulk Asbestos, Lead Metal, Lead-Based Paint, Limited Hexavalent Chromium,
and Poly Chlorinated Biphenyls Survey

Los Angeles County Department Of Public Works
Morris Dam
Located Five Miles North of Azuza

RECEIVED
CONSTRUCTION DIVISION

JAN 16 2002

Performed on
October 26, 27, 28, 1998
and February 16, 17, and 18, 1999

CONSTRUCTION MANAGEMENT
ENVIRONMENTAL COMPLIANCE

Submitted To

Ms. Soo Kim
Risk Management Division
Los Angeles County Department Of Public Works
900 S. Fremont
Alhambra, CA 91803-1331

HSA Project Number 99LA018

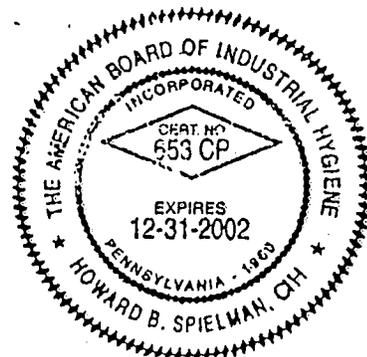
May 19, 1999

Prepared by

Reviewed by

Hank Pineda, CAC
Project Manager

Howard B. Spielman, PE, CIH, CSP, REHS
Principal





May 18, 1999

Ms. Soo Kim
Los Angeles County Department of Public Works
Risk Management Division
8th Floor
900 South Fremont
Alhambra, CA 91803

Re: Asbestos, lead-based paint, lead metal, limited hexavalent chromium and polychlorinated biphenyl sampling at Morris Dam located five miles north of Azuza; Performed on October 26, 27, 28, 1998 and February 16, 17, and 18, 1999; HSA Project Number 99LA018

Dear Ms. Kim:

Pursuant to your authorization, Health Science Associates (HSA) conducted an industrial hygiene building/structure materials investigation for suspect asbestos, lead and/or hexavalent chromium based-paint, lead wiring and polychlorinated biphenyls (PCBs) at the referenced Los Angeles County Department of Public Works (LACDPW) facility.

The asbestos, lead-based paint, lead metal, and hexavalent chromium samples were collected by Mr. Robert Weitzel, California certified site surveillance technician (SST) and Department of Health Services (DHS) interim certified lead project monitor. Mr. Hank Pineda, California Certified Asbestos Consultant (CAC) and DHS interim certified Lead-In-Construction Inspector/Risk Assessor also collected asbestos, lead-based paint, lead metal samples and was HSA's project manager. The polychlorinated biphenyl (PCB) sampling located inside the Transformer/Generator room was performed by Mr. Howard Ozar, Certified Industrial Hygienist (CIH).

Suspect asbestos containing material (ACM) samples were collected in accordance with accepted professional methodologies and submitted to HSA's Environmental and Industrial Hygiene laboratory for analysis via polarized light microscopy (PLM) with dispersion staining in accordance with EPA method number 600/R-93-116. The lower limit of detection for this method is one percent (1%) asbestos. The results are reported on Table I.

Paint chip samples were collected using appropriate paint chip sampling methodology. The samples were submitted to HSA's Environmental and Industrial Hygiene laboratory for analysis via inductively coupled argon plasma with atomic emission spectroscopy (ICAP, AES) in accordance with EPA method 6010. The paint chip results are reported in lead weight percent (Wt%) in dry film on Table II.

Paint chip and bulk metal samples were collected by scraping the surface with a sharpened hand tool or with a temperature-controlled heat gun and a sharpened hand tool. The samples were submitted to HSA's Environmental and Industrial Hygiene laboratory for analysis via ICAP, AES in accordance with EPA method 6010. The paint chip and bulk metal results are reported in parts per million (ppm) of lead and are located on Table III. Suspect hexavalent chromium paint chip samples were collected by scraping the surface with a sharpened hand tool or with a temperature-controlled heat gun and a sharpened hand tool. The samples were submitted to HSA's Environmental and Industrial Hygiene laboratory for analysis utilizing colorimetric analysis in accordance with EPA method 7196A. The paint chip results are reported in ppm of hexavalent chromium on Table IV.

Ms. Soo Kim
May 19, 1999
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Transformer oil samples were collected from two transformers located in the generator/transformer room. Suspect oil was drawn from each transformer using disposable pipets and pre-labeled sample bottles. The surface samples were collected by wiping the identified surfaces with clean sampling gauze. The gauzes wipe samples were then placed in pre-labeled sampling bottles. The samples were analyzed via gas chromatography in accordance with Environmental Protection Agency (EPA) Method 8081. The results are reported in ppm on Table V.

After sampling in the field, all samples were submitted to HSA's Industrial Hygiene and Environmental Laboratory for analysis following chain-of-custody procedures.

The site figures provided by LACDPW and the site figures generated by HSA used to depict sampling locations are found in Appendix A. The site photographs provided by LACDPW identifying the electrical wiring system related suspect asbestos containing materials can be found in Appendix B. The laboratory reports are located in Appendix C.

HSA's laboratory maintains accreditations by the American Industrial Hygiene Association (AIHA), the National Institute of Standards and Technology (NIST), the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP), and AIHA's Environmental Lead Laboratory Accreditation Program (ELLAP).

STANDARDS AND GUIDELINES

Asbestos

Asbestos Containing Material (ACM) - Any material containing more than one percent asbestos.

Asbestos Containing Construction Material (ACCM) - Any manufactured construction material which contains more than one-tenth of one percent asbestos by weight. 0.1%

If the total amount of ACM to be abated is greater than 100 square feet, the following regulations must be met.

- South Coast Air Quality Management District (SCAQMD), Rule 1403. This rule requires the notification and removal of all ACM items (friable and non-friable) from a building prior to demolition. It requires the use of a state certified and registered asbestos abatement contractor and a ten (10) day written notification for asbestos disturbance activities greater than 100 square feet. However, no notification is required if there is less than 100 square feet of ACM in the building. If analytical results determine that the asbestos content is less than 1% then this rule does not apply.
- Labor Code 6501.5 requires the use of a state certified and registered asbestos abatement contractor for all asbestos removal project of more than 100 square feet of ACM or ACCM.
- Federal Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101, California CCR Title 8 §1529 and 5208 require employers to monitor the exposure of their employees who may be exposed to asbestos. If employees are exposed above certain criteria the employer must take action

to limit the employee's exposure to asbestos and to protect the employee's health. 29CFR 1926.1101 also lowered the permissible exposure limit (PEL) for asbestos to 0.1 fibers per cubic centimeter of air (f/cc) expressed as an eight hour time weighted average (TWA).

Lead

- Bulk paint samples were collected to assess the lead content of painted building components during this survey. The Federal Department of Housing and Urban Development (HUD) suggests abatement when bulk lead paint levels exceed 0.5% by weight in dry film. However, this recommendation only applies to public and Indian housing.
- Bulk paint and metal samples were collected to assess the lead content of building components during this survey. Lead waste is regulated under California Title 22, 66261.24 the standard defines lead hazardous waste as greater than 1000 mg/kg of lead and or lead compounds as determined by Total Threshold Limit Concentration. (TTLC) or 5.0 milligrams per liter (mg/l) as determined by Soluble Threshold Limit Concentration. (STLC)
- The Consumer Products Safety Commission's definition of Lead Based Paint (LBP) is greater than 0.06% lead metal by weight.
- The Federal OSHA Lead Construction Standard, 29 CFR 1926.62, and the California Lead Construction Standard, Title 8 CCR §1532.1 require employers to provide employee training, establish a medical surveillance program (including biological monitoring), conduct an exposure assessment and protect employees during any building renovation which impacts lead coated building components.
- The Cal/OSHA lead in construction standard uses the 0.06% WT criterion to protect workers exposed to lead during construction activities and requires minimum training pursuant to the California Department of Health Services regulations for all construction workers encountering paint containing 0.06% WT lead and above.
- California CCR §5194, Hazard Communication Standard, requires employers to notify their employees of hazardous material in their workplace.

Hexavalent Chromium

- Bulk paint samples were collected to assess the hexavalent chromium content of the yellow painted railings during this survey. Hexavalent chromium [Cr VI compounds] is also regulated as a waste under California Title 22, 66261.24. The standard defines hexavalent chromium hazardous waste as greater than 500 mg/kg of Cr VI and or Cr VI compounds as determined by TTLC or 5.0 mg/l as analyzed via STLC.
- California CCR §5155, Airborne Contaminants, requires employers to control their employees exposure to particular airborne contaminants in their workplace. The maximum permitted exposure (Ceiling Limit) for Chromium VI is 0.1 milligrams per cubic meter of air (mg/m³). The ceiling limit is defined as the maximum concentration of an airborne contaminant to which an employee may be exposed to at any time.

PCBs

- Environmental - For the purposes of this survey, to identify the presence of PCBs in the identified transformers, HSA utilized the collection and analytical procedures specified by California Code of Regulations (CCR) Title 22, §66261.24 - Characteristic of Toxicity in our determination. In this regulation, EPA Method 8081 is called for in performing analysis of waste material suspected of containing PCBs. If a material waste has a PCB content greater than 50 mg/kg (50 ppm by wt.) then it would be considered a hazardous waste with respect to toxicity.
- Occupational - PCBs are regulated under California Code of Regulations (CCR) Title 8, §5155 - Airborne Contaminates. In this standard PCBs have a permissible exposure limit (PEL), expressed as an 8-hour time-weighted average (TWA) of 0.1 mg/m³ (42% chlorine) or 0.5 mg/m³ (54% chlorine) depending on the specific chlorodiphenyl present. PCBs also have a skin notation in the same regulation. The skin notation refers to the potential to contribute to the overall employee exposure of PCBs through skin absorption. Precautions to reduce or prevent skin contact are required.

Exclusions

Excluded from this scope of work was the collection of any other samples of hazardous materials (i.e. soil and ground water samples, or any other unidentified hazardous material) which may have been utilized in this facility during the course of its normal operations. Therefore, other metals, solvents, or other residual chemicals were not included in this scope of work nor were samples collected nor notes made of their possible existence. Also, excluded from the scope of work was detached machinery or fixtures adjacent to the facility and any other buildings/structures on the property outside of those identified by LACDPW to be sampled.

SUMMARY

ASBESTOS SAMPLING RESULTS

ACM Summary

10/0

The roof mastics on the Temporary Trailer were determined to be ACM. These roof materials were observed to be non-friable and in good condition on the date of the survey. No other ACMs were located at the Temporary Trailer during our survey.

The exterior stucco at the Dam Operator's house was determined to be ACM. The stucco materials were observed to be non-friable and in good condition on the date of the survey. It was reported to HSA that the flooring located inside the residence was installed less than three years ago; therefore, HSA did not sample the flooring materials as it is unlikely that these newly installed flooring materials contain asbestos.

The electrical conduit wiring systems located in the Southwest Pylon Phone System, F, and the Emergency Valve Chamber Packings, K, were determined to be ACM. The Entrance Upper Gate System, I, was determined by LACDPW's to be the same type of electrical wiring system as the Southwest Pylon Phone System. These wiring systems were observed to be non-friable and were encased in braided silver painted metal mesh on the date of the survey.

ACCM Summary

0.10/0

The West Abutment Shaft J. B. to Pump House wiring system at the Morris Dam was determined to be ACCM. These materials were observed to be non-friable and encased in lead metal conduit on the date of the survey.

LEAD-BASED PAINT RESULTS SUMMARY

Lead containing paint was found in the great majority of paints sampled at Morris Dam. Lead paint above the 0.06% WT (600 ppm) was found in the following components:

- Entrance to Dam: Metal gate, gray paint,
- Entrance to Dam: Metal chain link fence, silver paint,
- Entrance to Dam: Metal fence post, gray paint,
- Top of Spillway: Metal vent pipe, brown paint,
- Spillway Barrel Gate: Gate handle, brown paint,
- Spillway Valve Housing for Barrel Gate: Tan paint,
- Spillway: Diamond Plate, tan paint,
- Lower Spillway: Railing, yellow paint,

- Flag Post: Metal with silver paint,

- Northwest Storage Room: Metal door with tan paint; shelf, white paint,

- Southwest Communications Room: Wood floor, gray paint;

- Southwest Communications Room: Electrical box, black paint,

- Water Supply Outlet: Metal bump rail, gray paint; gate motors, tan paint, man basket, old yellow paint; metal plate by hoist, tan paint,

- Caterpillar House: Electrical lines, tan paint; roll up door, tan paint,

- Northeast corner of Dam: Valve, tan paint; valve housing, gray paint,
- Southeast corner of Dam, Electrical room: Electrical box, silver paint,
- Southeast Compressor room: Electrical boxes, tan paint,
- Compression room: Door, tan paint,

- Down Stream, Southeast Tunnel, Entrance: Electrical boxes, tan paint,

- Down Stream, Southeast Tunnel: Metal tract, tan paint,

- Emergency Pump room; Tunnel waterline, tan paint; tunnel, electrical switch pump #1, red paint; tunnel valve #1, handle, black paint; tunnel valve #1 housing, tan paint; tunnel valve #4, housing, tan paint; tunnel platform above

- valve #3, black paint; tunnel pump #3 housing, tan paint; tunnel valve #3 housing, silver paint; tunnel valve #1 housing, silver paint; tunnel tank with tan paint,
- Outlet: Lower southeast valve housing, tan paint; stair to Crane room, tan paint; Valve #1, black paint; valve #1 housing, tan paint; valve handles, below crane room, black paint; Pipes, tan paint; tanks, East of Crane room, tan paint,
- Crane room: Crane, silver paint; crane cable motor housing, black paint; pulleys on Crane cable motor, gray paint; roll-up door, tan paint; south door, tan paint; electrical boxes, tan paint; window frame, tan
- Top of Crane, roof: Cover over motor pulley, tan paint,
- Old Chlorine House: Door, tan paint; window frame, tan paint; pipes, tan paint; valve handle, red paint; scale, black paint; scale pan, black paint; crane, black paint;
- Southwest Tunnel by Old Chlorine room: Hand rail, tan paint,
- Trail from Old Chlorine room: Wood hand rail, white paint.
- Metropolitan Water District: Metal water pipe, above Old Chlorine House, tan paint.
- General room: Window frame, tan paint.
- Office Trailer: Steps, brown paint.
- Domestic Water Tank room: Pipe with silver paint; door, gray paint,
- Dam Operator's House; Front door, white paint; interior, front room, north wall, white paint; interior, master bedroom, north window sill, white paint; interior dining room window sill, white paint; interior, hallway, west wall, white paint; interior kitchen cabinets, white paint; exterior kitchen, window sill, beige paint. Dam Operator's House; exterior kitchen window frame, brown paint; exterior garage size door, brown paint; exterior porch overhang, brown paint.

On the day of the survey the paints were observed to be in fair to poor condition. This is not unexpected given the age of the facility.

All components with paint similar in color and appearance to those identified above should be treated as containing lead

until sampling is performed.

LEAD METAL SUMMARY

Elemental lead metal conduit, conductor wiring, and conduit sheathing were located throughout the Dam complex. The lead metal was located by HSA on the items listed below.

- The West Abutment Shaft J. B. To Pump House: Lead metal 2/O conductor wire and 3/O conductor wire conduit.
- Emergency & Lighting Transformers: Lead metal sheath.
- Emergency Pump Room: Lead conduit from dom-pumps.

Lead metal may also be located on other similar wiring systems at the Morris Dam complex. These should be treated as containing lead metal until sampled for lead content.

RECOMMENDATIONS

Asbestos and Lead

The Morris Dam facility was determined to have both asbestos and LBP. It is HSA's understanding that the facility may undergo extensive renovation which may require asbestos or lead impact and disposal at some future date. The abatement and/or disposal must be performed pursuant to the LACDPW Asbestos and LBP removal specifications. The asbestos and lead related work on the project should be monitored under the direction of a Certified Industrial Hygienist, (CIH) who is also a State of California Certified Asbestos Consultant (CAC) and California Department Of Health Services Certified Lead-Related Construction Project Designer.

HSA further advises that specific written site work procedures be drafted prior to the project start by a CIH/CAC/Lead-Related Construction Project Designer. Particular attention to lead waste streams and disposal is necessary.

In addition, due to the size and age of the facility, hidden or unknown suspect ACM/ACCM or lead containing materials may be uncovered during the project. Thus, all contractors working on the project should be notified of LACDPW's policies in regard to notifying LACDPW if suspect hazardous materials are located during the project.

HSA also recommends that the asbestos and LBP abatement and disposal operations be performed by a single abatement contractor dually qualified to perform asbestos and LBP abatement and disposal. It is HSA's experience that by combining the asbestos and LBP operations, an overall cost savings for the project can be realized.

To reduce the potential lead hazardous waste disposal costs LACDPW has the option of directing the contractor to recycle metal and/or components with intact LBP in accordance with current EPA and CCR Title 22, Chapter 16, § 66266.1., a copy of which is included in Appendix D.

Operations and Maintenance Programs

Since ACM and LBP are located at the facility, LACDPW employees and site visitors should be notified of the presence of these hazardous materials. Additionally, written Operations and Maintenance programs should be generated for compliance with California CCR Title 8 §1529 and 1532.1.

Hexavalent Chromium Summary

No hexavalent chromium at or above the detection limit utilizing EPA method 7196A were found in the samples collected by HSA.

PCBs Summary

The oil (maximum result = 45 ppm) in the transformers is not considered a hazardous waste based on the TTLC (EPA Method 8081 - toxicity characteristic) sampling results; however, they should be managed appropriately through internal procedures in effect by way of the county's hazardous waste compliance program, as concentrations approaching the regulatory level were detected in the transformer oil. Wipe samples indicated that oil which contains PCBs has leaked to the floor. The extent of possible contamination is not known, but is probably only limited to the

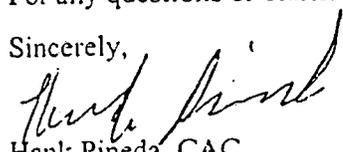
floor surface. Prompt investigation and/or remediation concerning this issue is recommended.

Any DPW workers that are required to work near or on the transformers should be qualified with respect to occupational regulations regarding PCBs and associated hazards.

HSA is available to assist LACDPW in the implementation of the recommendations contained herein.

For any questions or clarifications please call.

Sincerely,



Hank Pineda, CAC
Project Manager, Lead and Asbestos Services

Reviewed by,

Howard B. Spielman, CIH, CSP, CAC, PE, REHS
President

**TABLE I
BULK ASBESTOS SAMPLING RESULTS**

Los Angeles County Department of Public Works
Morris Dam
October 27, and 28, 1998, February 17, and 18, 1999

Sample Number 99LA018	Location/Description (see Figures 1, 2, 3, 4, 9 and 10)	Asbestos Results Type and Percent (%)
1-1	Emergency pump room, in tunnel north wall/cement	BLD
1-2	Emergency pump room, in tunnel south wall/cement	BLD
1-3	West tunnel, north wall, cement	BLD
1-4	East tunnel, east wall, cement	BLD
1-5	Entrance to east tunnel, cement	BLD
2-1	Crane room, window, window putty	BLD
2-2	Crane room, window, window putty	BLD
2-3	Crane room, window, window putty	BLD
3-1	Old chlorine house, east window, window putty	BLD
3-3	Old chlorine house, south west window, window putty	BLD
4-1	Caterpillar room, caterpillar gates, black tar	BLD
4-2	Caterpillar room, caterpillar gate, black tar	BLD
4-3	Caterpillar room, caterpillar gate, black tar	BLD
5-1	Caterpillar house, window, window putty	BLD
5-2	Caterpillar house, window, window putty	BLD
5-3	Caterpillar house, window, window putty	BLD
6-1	Generator room, window, window putty	BLD
6-2	Generator putty, window, window putty	BLD
6-3	Generator room, window, window putty	BLD
7-1	Office trailer floor, 12x12 tan floor tile & brown mastic	Tile: BLD Mastic: BLD
7-2	Office trailer floor, 12x12 tan floor tile & brown mastic	Tile: BLD Mastic: BLD
7-3	Office trailer floor, 12x12 tan floor tile & brown mastic	Tile: BLD Mastic: BLD

**TABLE I
BULK ASBESTOS SAMPLING RESULTS**

Los Angeles County Department of Public Works
Morris Dam
October 27, and 28, 1998, February 17, and 18, 1999

Sample Number 99LA018	Location/Description (see Figures 1, 2, 3, 4, 9 and 10)	Asbestos Results Type and Percent (%)
8-1	Office trailer roof, putty/gray tar	Chrysotile: 15%
8-2	Office trailer roof, patch/gray tar	Chrysotile: 15%
8-3	Office trailer roof, patch/gray tar	Chrysotile: 20%
9-1	Hill on north side of Dam Operator's house/cement	BLD
9-2	Hill on north side of Dam operator's house/cement	BLD
9-3	Hill on north side of Dam operator's house/cement.	BLD
10-1	Domestic water tank room, windows, window putty	BLD
10-2	Domestic water tank room, window, window putty	BLD
10-3	Domestic water tank room, window, window putty	BLD
11-1	Dam operator's house, master bedroom, south wall/plaster	BLD
11-2	Dam operator's house, hallway, north wall/plaster	BLD
11-3	Dam operator's house, kitchen, west wall/plaster	BLD
12-1	Dam operators house, attic, brown insulation	BLD
12-2	Dam operators house, attic, brown insulation	BLD
13-1	Exterior, Dam operator's house, kitchen window, window putty	BLD
13-2	Exterior, Dam operator's house, kitchen window, window putty	BLD
13-3	Exterior, Dam operator's house, kitchen window, window putty	BLD
14-1	Exterior, Dam operator's house, north/stucco	Chrysotile: 2%
14-2	Exterior, Dam operator's house, south/stucco	Chrysotile: 2%
14-3	Exterior, Dam operator's house, west/stucco	Chrysotile: 2%
15-1	Roof, Dam operator's house, felt paper	BLD
15-2	Roof, Dam operator's house, felt paper	BLD

**TABLE I
BULK ASBESTOS SAMPLING RESULTS**

Los Angeles County Department of Public Works
Morris Dam
October 27, and 28, 1998, February 17, and 18, 1999

Sample Number 99LA018	Location/Description (see Figures 1, 2, 3, 4, 9 and 10)	Asbestos Results Type and Percent (%)
15-3	Roof, Dam operator's house, felt paper	BLD
16-1	South East Pylon, LS7, braided white insulated wire, location - D	BLD
16-2	South East Pylon, LS7, braided white insulated wire, location - D	BLD
17-1	Catipillar Gate House, 11M wire, location - E	BLD
17-2	Catipillar Gate House, 11M wire, location - E	BLD
18-1	South East Pylon, LS6, 3/0 wire, location - C	BLD
18-2	South East Pylon, LS6, 3/0 wire, location - C	BLD
19-1	South West Pylon, red phone wiring encased in multi-conductor braided cable, location - F. Similar type of colored wire inside this cable.	Chrysotile: 30%
19-2	South West Pylon, red phone wiring encased in multi-conductor braided cable, location - F. Several types of this wiring inside cable.	Chrysotile: 30%
19-3	South West Pylon, multi-conductor braided cable, location - F.	Chrysotile: 25%
19-4	South West Pylon, multi-conductor braided cable, location - F. Several types of this wiring inside cable.	Chrysotile: 60%
20-1	South West Pylon, Oakem, brown, location - G.	BLD
20-2	South West Pylon, Oakem, brown, location - G.	BLD
21-1	West Abutment Shaft to Pump House, 2/0 conductor wire with lead metal, location - H.	BLD
21-2	West Abutment Shaft to Pump House, 3/0 conductor wire in lead metal conduit, location - H.	Chrysotile: < 1%
23-1	Emergency Valve Chamber, sensor control wiring, location - J, outside.	BLD
23-2	Emergency Valve Chamber, sensor control wiring, location - J, inside.	BLD

**TABLE I
BULK ASBESTOS SAMPLING RESULTS**

Los Angeles County Department of Public Works
Morris Dam
October 27, and 28, 1998, February 17, and 18, 1999

Sample Number 99LA018	Location/Description (see Figures 1, 2, 3, 4, 9 and 10)	Asbestos Results Type and Percent (%)
24-1	Emergency Valve Chamber packing, 1 inch square, black, location - K	Chrysotile: 80%
24-2	Emergency Valve Chamber packing, 1/4 inch square, black, location - K	Chrysotile: 80%
24-3	Emergency Valve Chamber packing, 1/8 inch square, white, location - K	Chrysotile: 80%
25-1	Conduit Control House, heater unit fan blades, location L.	BLD
26-1	Generator/Transformer Room, Lighting Transformer wiring with lead sheathing, location A	BLD
26-2	Generator /Transformer Room, Emergency Lighting Transformer wiring with lead sheathing, location B.	BLD
27-1	Hoist wiring, brown braided wire.	BLD
28-1	Valve #4, red gasket	BLD
29-1	Pipe gasket, red, located near valve # 3 & 4. Intake from lake pipe assembly - for high pressure pumps to upper tank.	BLD
Standards		
EPA - ACM and ACBM		1.0
State of California - ACCM		0.1
<p>Abbreviations: BLD = Below the limit of detection; < = less than; % - percent; EPA = Environmental Protection Agency; ACM = Asbestos Containing Material; ACBM = Asbestos Containing Building Material; ACCM = Asbestos Containing Construction Material</p>		

**TABLE II
PAINT CHIP SAMPLES**

Los Angeles Department of Public Works
Morris Dam

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number 99LA018	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
1026-01PC	Entrance to Dam, metal gate, gray paint	5.8
1026-02PC	Entrance to Dam, metal chain link fence, silver paint	0.69
1026-03PC	Entrance to Dam, paint on road, yellow paint	0.047
1026-04PC	Entrance to Dam, metal post for fence, gray paint	0.29
1026-05PC	Front of Dam operator's house, metal railing, gray paint	BLD (≤ 0.01)
1026-06PC	Top of Dam, metal railing, yellow paint	0.017
1026-07PC	Top of spillway, metal vent pipe, brown paint	0.29
1026-08PC	West side of spillway, pipe, tan paint	0.047
1026-09PC	West spillway electrical box, tan paint	0.025
1026-10PC	Spillway barrel gate handle, brown paint	5.3
1026-11PC	Spillway valve housing for barrel gate, tan paint	3.4
1026-12PC	Spillway diamond plating, tan paint	11
1026-13PC	Flag post, metal with silver paint	2.2
1026-14PC	Lower spillway, railing, yellow paint	0.07
1026-15PC	Spillway barrel gate, tan paint	BLD (≤ 0.01)
1026-16PC	Northwest storage room, door, metal with tan paint	3.9
1026-17PC	Northwest storage room, shelf, white paint	2.6

**TABLE II
PAINT CHIP SAMPLES**

Los Angeles Department of Public Works
Morris Dam

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number 99LA018	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
1026-18PC	Southwest communication room, floor, wood/gray paint	0.20
1026-19PC	South west communication room, electrical box, black paint	0.45
1026-20PC	Outside south west communication room, fire extinguisher, red paint	BLD (<0.01)
1026-21PC	Water supply outlet, metal bump rail, gray paint	41
1026-22PC	Water supply outlet, gate motors, tan paint	11
1026-23PC	Water supply outlet, hoist, yellow paint	0.044
1026-24PC	Water supply outlet, man basket, new yellow paint	BLD (<0.02)
1026-25PC	Water supply outlet, man basket, <u>old</u> yellow paint	1.5
1026-26PC	Water supply outlet, metal plate by hoist, tan paint	9.8
1026-27PC	Caterpillar house, west door, tan paint	0.029
1026-28PC	Caterpillar house, electrical lines, tan paint	0.32
1026-29PC	Caterpillar house, metal beam, tan paint	0.015
1026-30PC	Northeast corner of Dam, valve, tan paint	0.15
1026-31PC	Northeast corner of Dam, valve housing, gray paint	0.76

**TABLE II
PAINT CHIP SAMPLES**

**Los Angeles Department of Public Works
Morris Dam**

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number 99LA018	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
1026-32PC	Southeast of Dam, electrical room, electrical box, silver paint	29
1026-33PC	Southeast compressor room, electrical boxes, tan paint	0.38
1026-34PC	Compression room, door, tan paint	4.6
1026-35PC	Southeast tunnel gate, metal with tan paint	0.053
1026-36PC	Southeast tunnel, electrical conduit, tan paint	0.044
1026-37PC	Southeast tunnel railing, around test equipment, tan paint	0.015
1026-38PC	Caterpillar house, roll up door, tan paint	0.12
1027-39PC	Down stream, south east tunnel, entrance gate, tan paint	0.032
1027-40PC	Down stream, south east tunnel, electrical boxes, tan paint	13
1027-41PC	Down stream, south east tunnel hand rail, yellow paint	0.052
1027-42PC	Down stream, south east tunnel, metal tract, tan paint	18
1027-43PC	Emergency pump room, tunnel waterline, tan paint	25
1027-44PC	Emergency pump room, tunnel, electrical switch pump #1, red paint	1.2
1027-45PC	Emergency pump room, tunnel, valve #1 handle, black paint	0.11

**TABLE II
PAINT CHIP SAMPLES**

Los Angeles Department of Public Works
Morris Dam

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
99LA018		
1027-46PC	Emergency pump room, tunnel, valve #1 housing/tan paint	2.3
1027-47PC	Emergency pump room, tunnel, valve #4 housing, tan paint	3.9
1027-48PC	Emergency pump room, tunnel, platform above valve #3, black paint	0.16
1027-49PC	Emergency pump room, tunnel, pump #3, housing, tan paint	0.20
1027-50PC	Emergency pump room, tunnel, pump #1 bracket, gray paint	0.021
1027-51PC	Emergency pump room, tunnel, valve #1, housing/silver paint	15
1027-52PC	Emergency pump room, tunnel, tank with tan paint	0.30
1027-53PC	Outlet, lower south east valve housing, tan paint	1.9
1027-54PC	Outlet, stair to crane room, tan paint	0.18
1027-55PC	Outlet valve #1, outlet stair hand rails, yellow paint	0.014
1027-56PC	Outlet valve #1, black paint	6.1
1027-57PC	Outlet valve #1, housing, tan paint	15
1027-58PC	Outlet valve handles, below crane room, black paint	3.7
1027-59PC	Outlet, pipes, tan paint	19

**TABLE II
PAINT CHIP SAMPLES**

Los Angeles Department of Public Works
Morris Dam

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
99LA018		
1027-60PC	Outlet tanks, east of crane room, tan paint	11
1027-61PC	Crane room, crane, silver paint	22
1027-62PC	Top of crane roof, cover over motor pully, tan paint	0.12
1027-63PC	Crane room, crane cable motor housing, black paint	0.73
1027-64PC	Crane room pulleys on crane cable motor/crane, grey paint	0.19
1027-65PC	Crane room, roll-up door, tan paint	0.077
1027-66PC	Crane room, south door, tan paint	0.10
1027-67PC	Crane room, electrical boxes, tan paint	10
1027-68PC	Crane room, window frame, tan paint	6.7
1027-69PC	Old chlorine house, door, tan paint	1.6
1027-70PC	Old chlorine house, window frame, tan paint	22
1027-71PC	Old chlorine house, pipes, tan paint	0.31
1027-72PC	Old chlorine house, valve handle, red paint	0.59
1027-73PC	Old chlorine house, scale, black paint	1.2
1027-74PC	Old chlorine house, scale pan, tan paint	17
1027-75PC	Old chlorine house, crane, black paint	0.15
1027-76PC	Tunnel southwest by old chlorine room, hand rail, tan paint	0.13

**TABLE II
PAINT CHIP SAMPLES**

Los Angeles Department of Public Works
Morris Dam

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
99LA018		
1027-77PC	Metropolitan Water District water pipe, above old chlorine house/tan paint	7.1
1027-78PC	Wood hand rail on trail from old chlorine room, back to top/white paint	0.23
1027-79PC	General room, window frame, tan paint	0.88
1027-80PC	Office trailer, steps, brown paint	0.11
1027-81PC	Office trailer, exterior door, tan paint	BLD (<0.01)
1027-82PC	Office trailer, exterior, tan paint	BLD (<0.01)
1027-83PC	Office trailer, exterior, brown paint	BLD (<0.01)
0218-84PC	Office trailer, interior west, door, brown paint	0.023
1028-85PC	Domestic water tank room, pipe with silver paint	35
1028-86PC	Domestic water tank room, door, gray paint	50
1028-87PC	Dam operator's house, front door, white paint	0.16
1028-88PC	Dam operator's house front room, north wall/white paint	0.10
1028-89PC	Dam operator's, house, master bedroom door/white paint	0.035
1028-90PC	Dam operator's house, master bedroom north window sill/white paint	0.083
1028-91PC	Dam operator's house, linen closet, white paint	0.053

**TABLE II
PAINT CHIP SAMPLES**

**Los Angeles Department of Public Works
Morris Dam**

October 26, 27, and 28, 1998 & February 18, 1999

Sample Number	Location/Description (see Figures 5, 6, 7, and 8)	Lead WT%
99LA018		
1028-92PC	Dam operator's house, dining room , window sill, white paint	0.58
1028-93PC	Dam operator's house, hallway, west wall, white paint	0.13
1028-94PC	Exterior Dam operator's house, kitchen window sill, beige paint	0.71
1028-95PC	Exterior Dam operator's house, porch overhang, brown paint	0.26
1028-96PC	Dam operator's house, kitchen cabinets, white paint	0.084
1028-97PC	Exterior Dam operator's house, kitchen window frame, brown paint	2.9
1028-98PC	Exterior Dam operator's house, garage size door, brown paint	0.76
1028-99PC	Exterior Dam operator's house, patio cover, white paint	0.014
0218-100PC	Valve #4, grey paint with orange undercoat on bolt	2.9
Standard and Guidelines		
Consumer Products Safety Commission		0.06
HUD Guidelines, June, 1995		0.5
Abbreviations: WT% = weight by percent; BLD = below the limit of detection; < = less than		

TABLE III
Lead
Total Threshold Limit Concentration
Department of Public Works
Morris Dam

October 26, and 27, 1998

Sample Number 98LA018	Location/Description	TTLIC Lead ppm
1026-01	At Dam entrance, metal gate, gray paint	42,000
1026-02	Top of Dam, Railing with yellow paint	180
1026-03	Top of spillway, vent pipe, brown paint	2,200
1026-04	Spillway, barrel gate valve housing, tan paint	1,600
1026-05	Lower spillway railing, yellow paint	480
1026-06	Southwest communication room, outside fire extinguisher, red paint	21
1026-07	Southwest corner of Dam, electrical room, electrical box, silver paint	47,000
1027-08	Emergency pump room in tunnel, electrical switch, red paint	9,400
1027-09	Emergency pump room, tunnel, pump #1 handle, black paint	1,900
Standard and Guidelines		
Maximum Contaminant Level		1000
Abbreviations: BLD = below the limit of detection; < = less than; ppm = parts per million; TTLIC = Total Threshold Limit Concentration		

TABLE III
TTLIC
LEAD CONDUIT SAMPLE RESULTS
Department of Public Works
Morris Dam

October 27, 1999

*100%
lead by
weight*

Sample Number 99LA018	Location/Description	TTLIC Lead ppm
1027-01	Emergency pump room conduit from dom-pumps/lead pipe	1,000.000 ✓
Standards and Guidelines		
Maximum Contaminant Level		1,000
Abbreviations: BLD = below the limit of detection; < = less than; ppm = parts per million; TTLIC = Total Threshold Limit Concentration		

**TABLE IV
TTLC**

Department of Public Works
Morris Dam

October 26, 1998

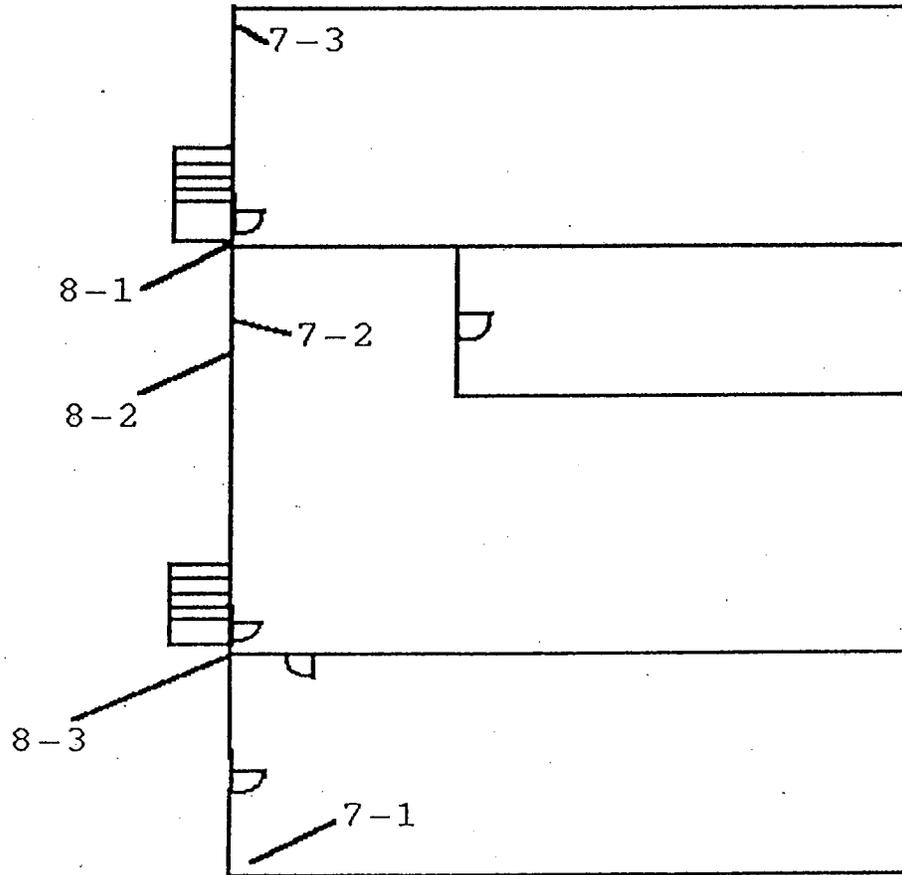
Sample Number 99LA018	Location/Description	TTLC Hexavalent Chromium ppm
1026-01	Top of Dam, railing, yellow paint	BLD <0.05
1026-02	Lower spillway railing, yellow paint	BLD <0.05
Standards		
Maximum Contaminant Level		500
BLD = below the limit of detection; < = less than; ppm = parts per million; TTLC = Total Threshold Limit Concentration		

TABLE V
PCBs
Department of Public Works
Morris Dam

February 17, 1999

Sample Number 99LA018	Location/Description	PCBs (ppm)
M021799-1	Generator/Transformer Room- Lighting Transformer A - Draw sample from 20 gallon, XFMER 1, S/N -1519111, Allis -Chalmers Mfg.	45
M021799-2	Generator/Transformer Room- Emergency Lighting Transformer B, - Draw sample from 15 gallon, XFMER 2, S/N -1519113, Allis -Chalmers Mfg.	3.6
M021799-3	Generator/Transformer Room- Lighting Transformer A - Wipe sample from oil stain on outside surface of 20 gallon, XFMER 1, S/N -1519111, Allis -Chalmers Mfg.	3.9
M021799-4	Generator/Transformer Room- Lighting Transformer A - Wipe sample from oil stain on concrete at base of 20 gallon XFMER 1, S/N -1519111, Allis -Chalmers Mfg.	14
M021799-5	Generator/Transformer Room- Emergency Lighting Transformer B, - Wipe sample from oil stain on outside surface of 15 gallon, XFMER 2, S/N -1519113, Allis -Chalmers Mfg.	5.3
Standards and Guidelines		
Criterion Level Defining a Hazardous Waste - PCBs (EPA 8081)		50 ppm
Abbreviations: ppm = parts per million; TTLC = total threshold limit concentration; PCBs = poly chlorinated biphenyls		

APPENDIX A
SITE FIGURES



Roof
gr. for moisture
15% ACM

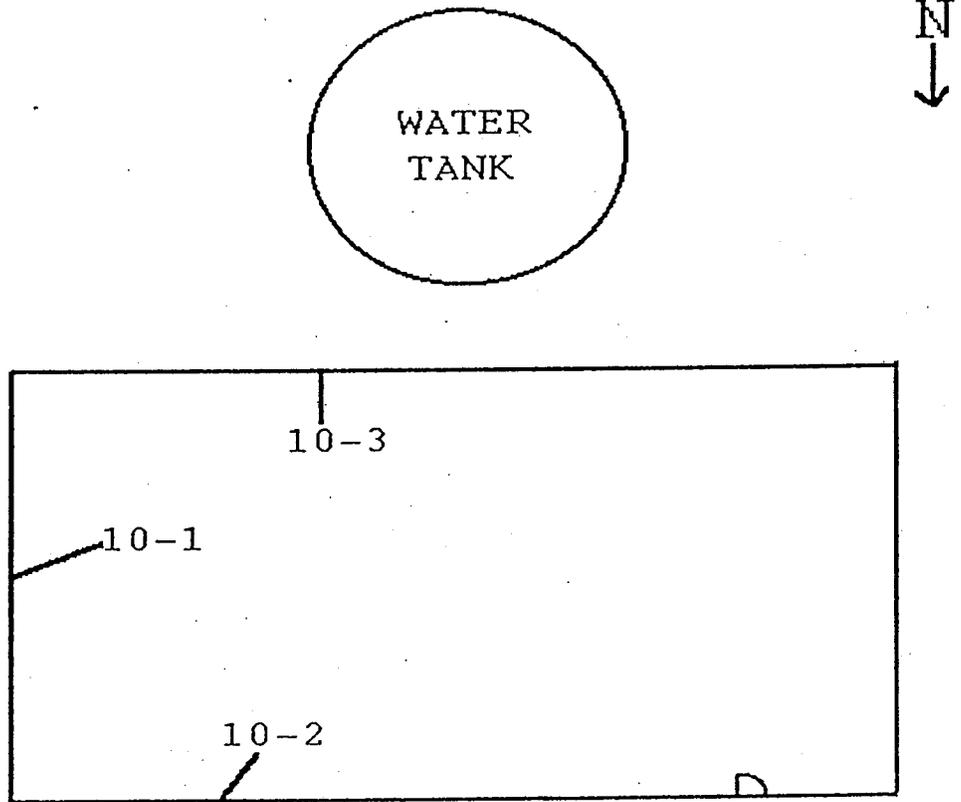
Please note: Figure not to scale

Originator: B. Weitzel

Date(s) Covered: 10/26, 27, 28/98

Morris Dam
Trailer
ACM Sample Locations

Health
Science
Associates



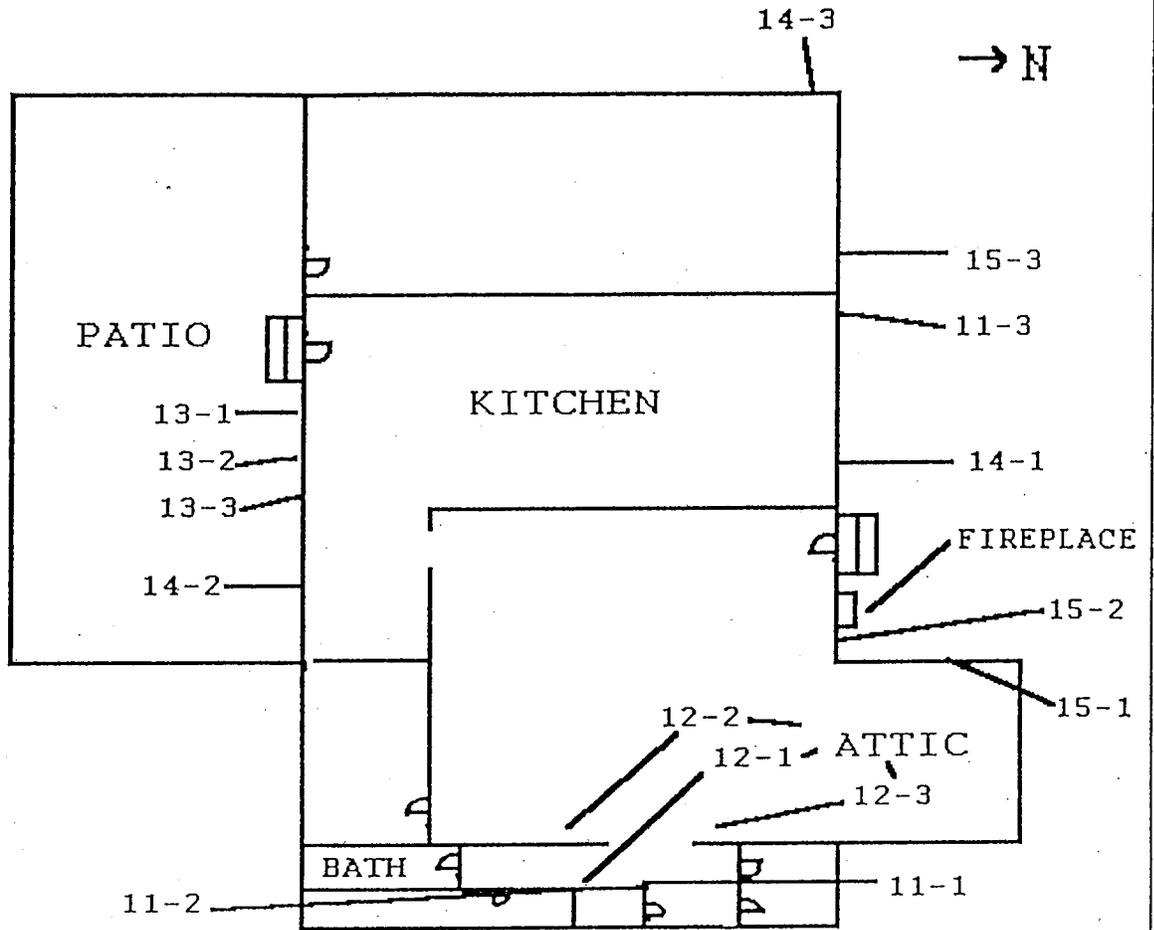
Please note: Figure not to scale

Originator: B. Weitzel

Date(s) Covered: 10/26, 27, 28/98

Morris Dam
ACM Sample Locations

Health
Science
Associates



*Exterior Stucco
ACM 2%*

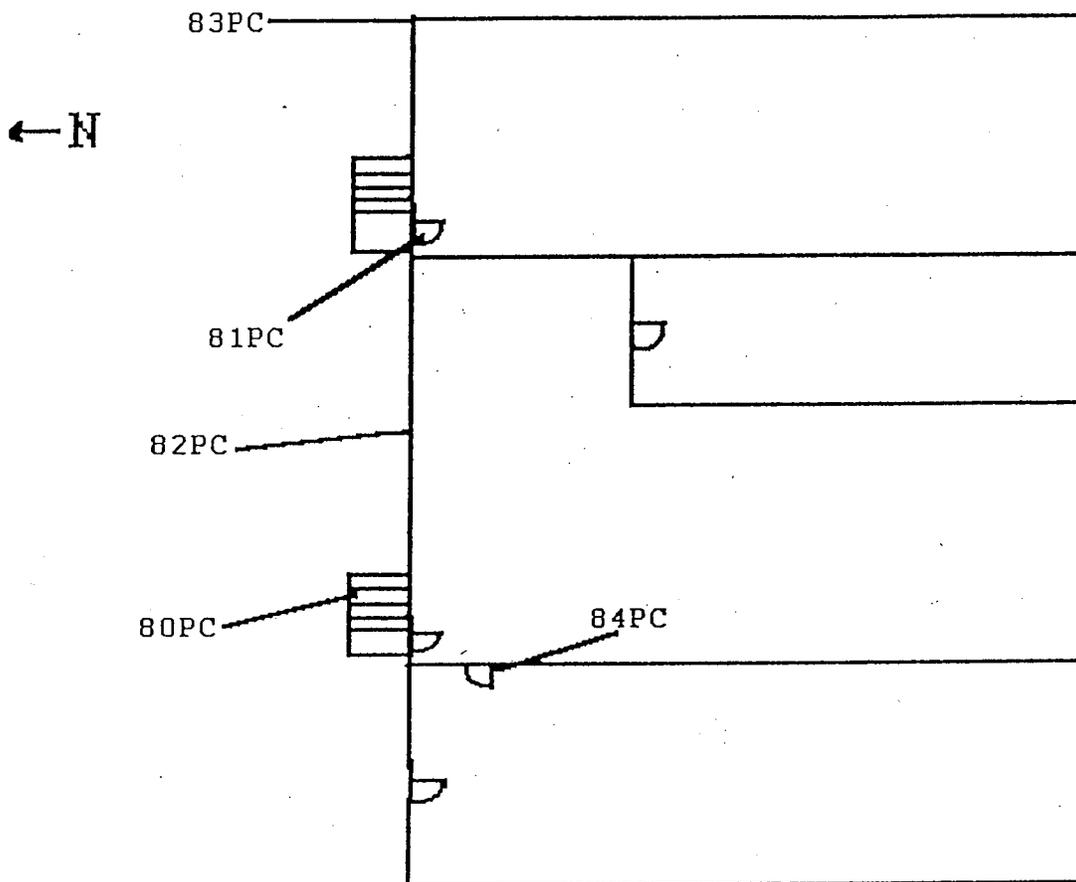
Please note: Figure not to scale

Originator: B. Weitzel

Date(s) Covered: 10/26, 27, 28/98

Morris Dam
ACM Sample Locations

Health
Science
Associates



Please note: Figure not to scale

Originator: B. Weitzel

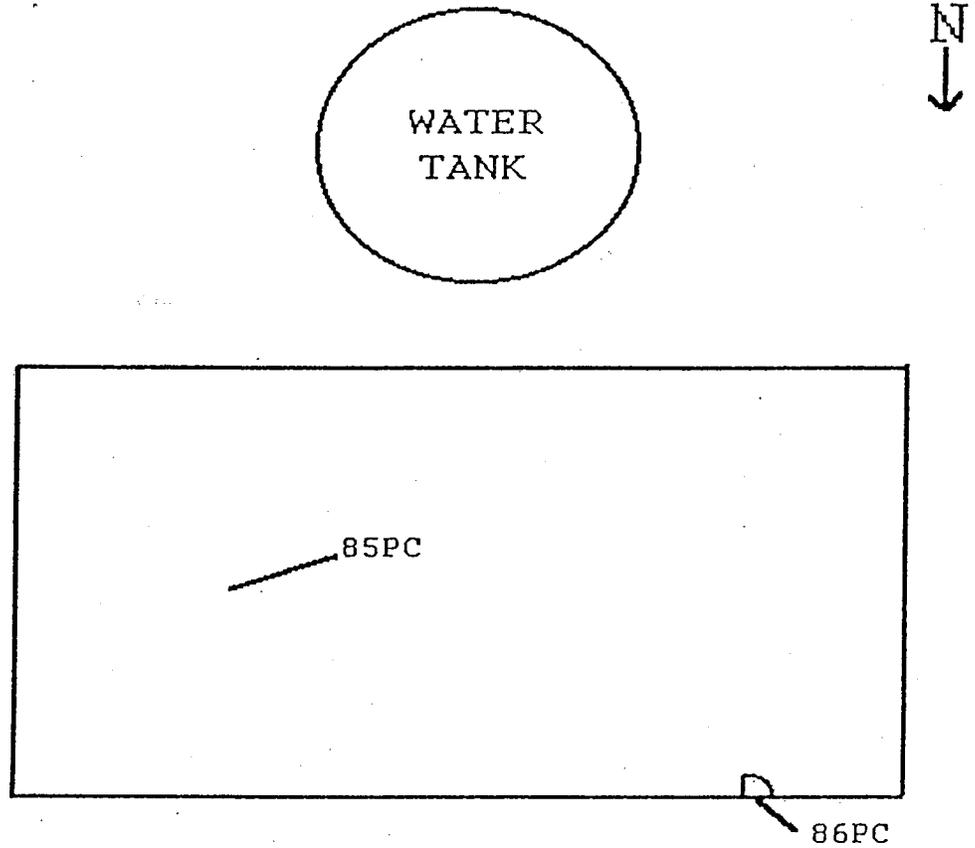
Date(s) Covered: 10/26, 27, 28/98

Morris Dam Office
Trailer
Paint Sample Locations

Health
Science
Associates

Figure 7

Project: 99LA018



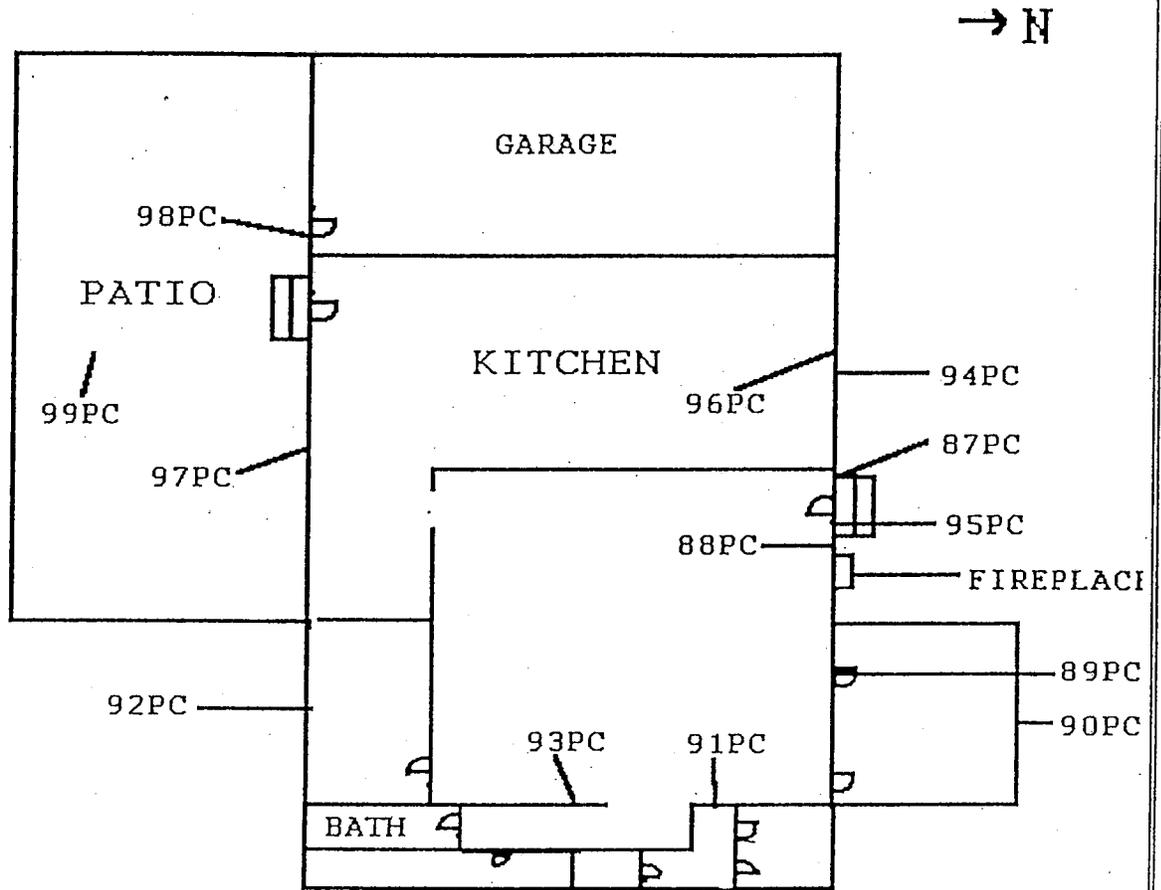
Please note: Figure not to scale

Originator: B. Weitzel

Date(s) Covered: 10/26, 27, 28/98

Morris Dam
Paint Sample Locations

Health
Science
Associates



Please note: Figure not to scale

Originator: B. Weitzel

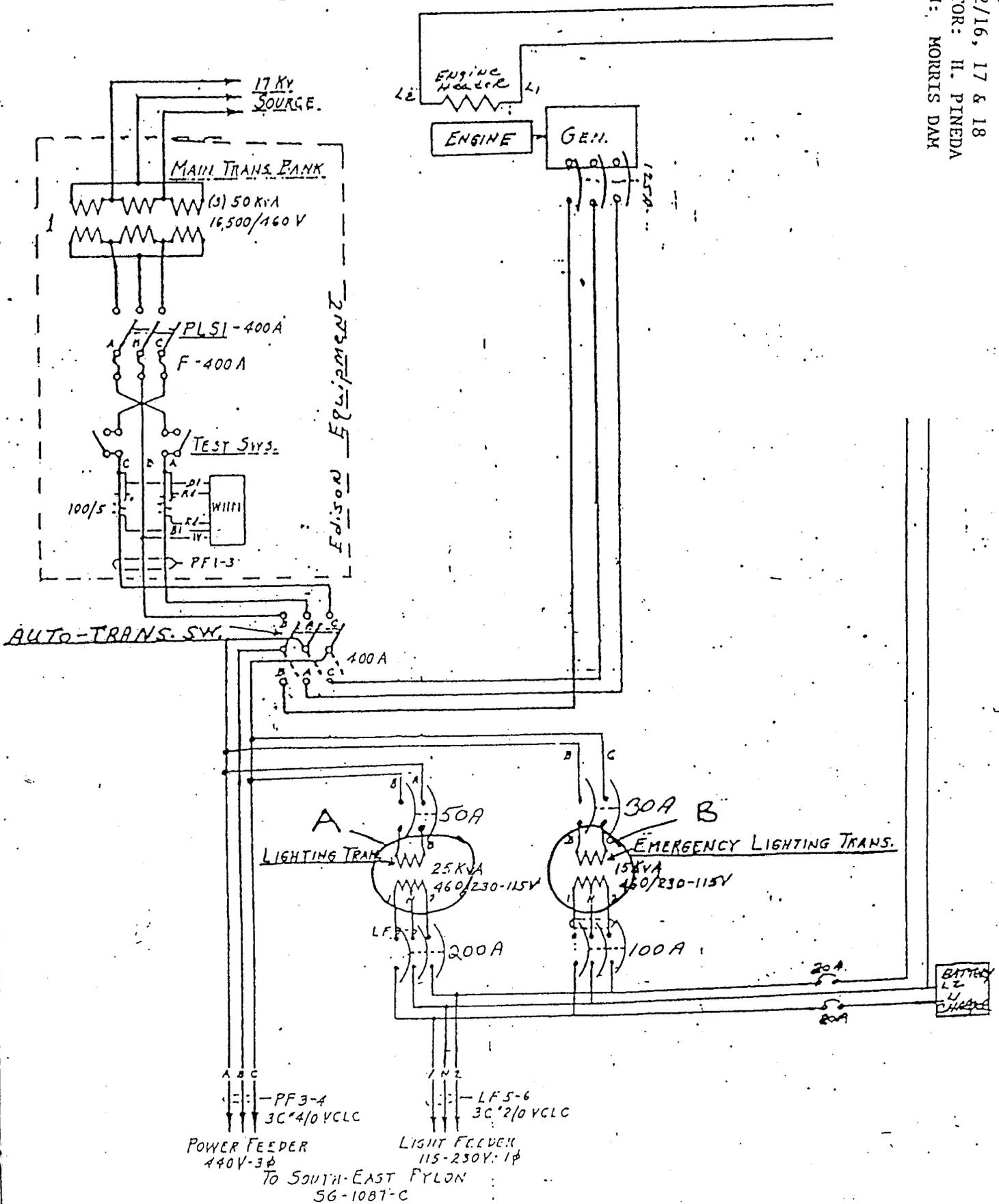
Date(s) Covered: 10/26, 27, 28/98

Morris Dam Operators House
Paint Sample Locations

Health
Science
Associates

MORRIS Dam
POWER AND LIGHT WIRING DIAGRAM
TRANSFORMER AND GENERATOR ROOM

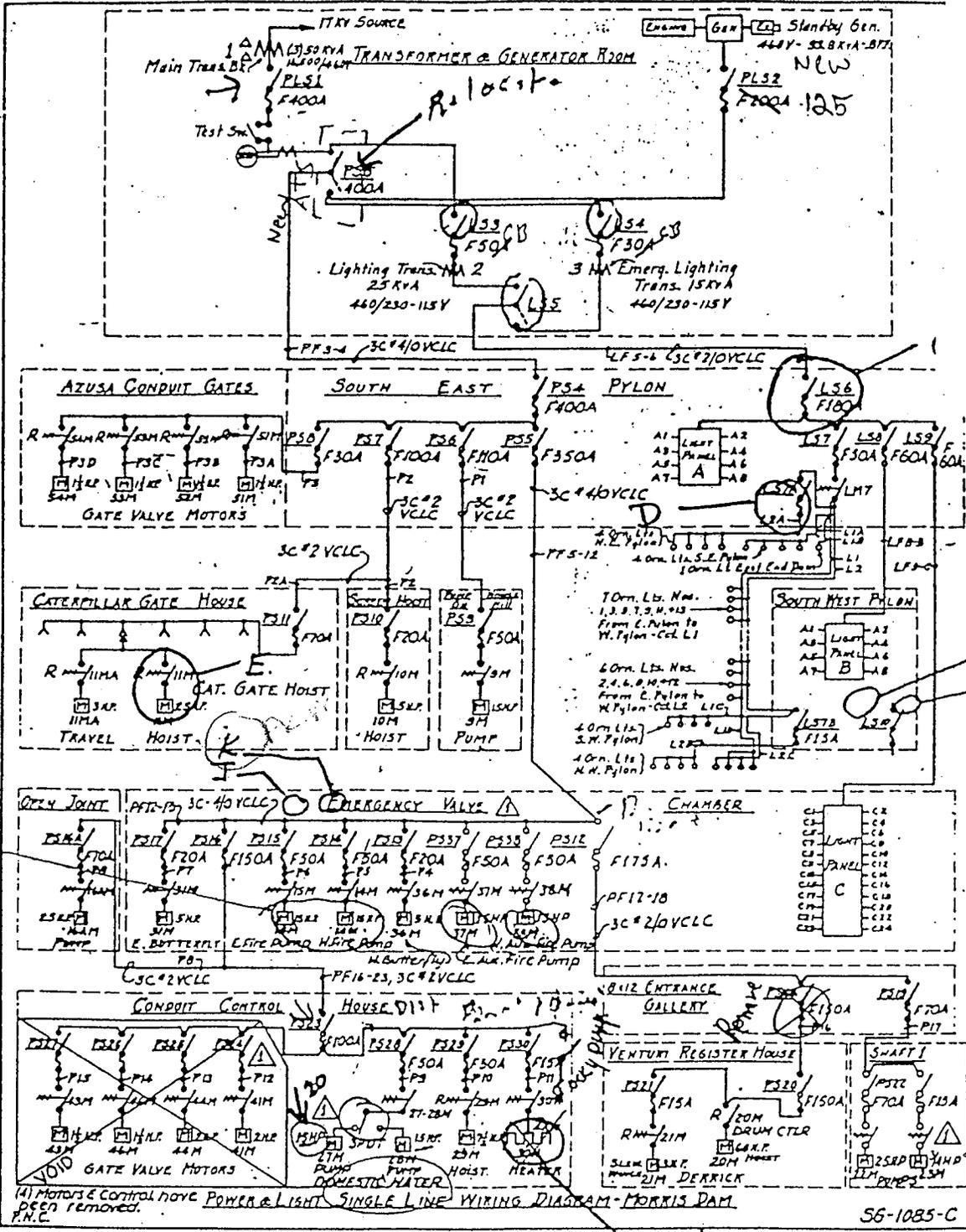
FIGURE 9
 DATE: 2/16, 17 & 18
 ORIGINATOR: H. PINEDA
 LOCATION: MORRIS DAM



110 data - R-5-92

56-1086-C

SCE P831-2598



F
 G
 H
 West Abutment Tunnels Hoist to West Pump House on A!!!
 I
 Navy water

Light out of Five foot x

Cut Line When Placed In Frame

PASADENA WATER DEPARTMENT
 SAN GABRIEL PROJECT
 MORRIS DAM
 SINGLE LINE WIRING DIAGRAM OF
 POWER & LIGHT LAYOUT FOR DAM

LEGEND

F - Fuse size,
 R - Reversing.

NO	DATE	DWNCKD	REVISION	REC	APP
	4-5-67	J.A.	Revised as installed		

Recommended by H. PinEDA
 Approved by H. PinEDA
 Title Number 56-1085-C

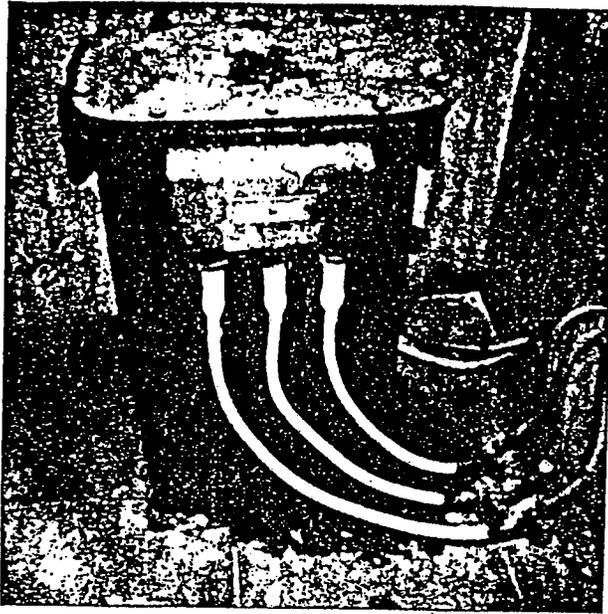
E-2694

**APPENDIX B
ELECTRICAL WIRING SYSTEM
PHOTOGRAPHS**

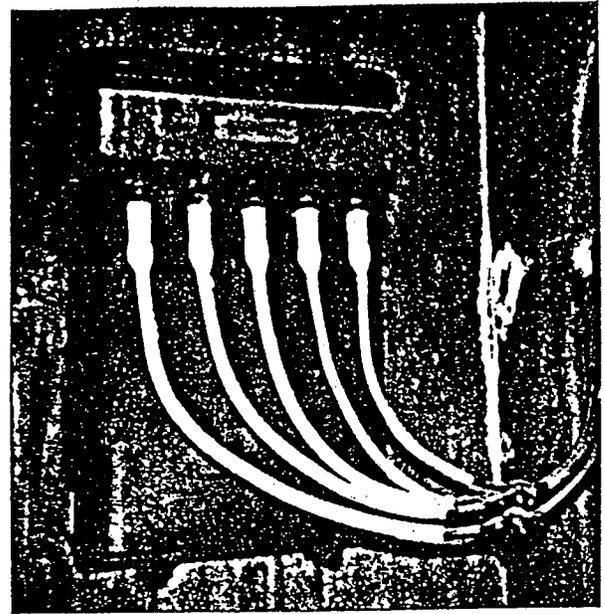
Morris Dam Asbestos Wire Survey

Burt Bryant 1/7/99

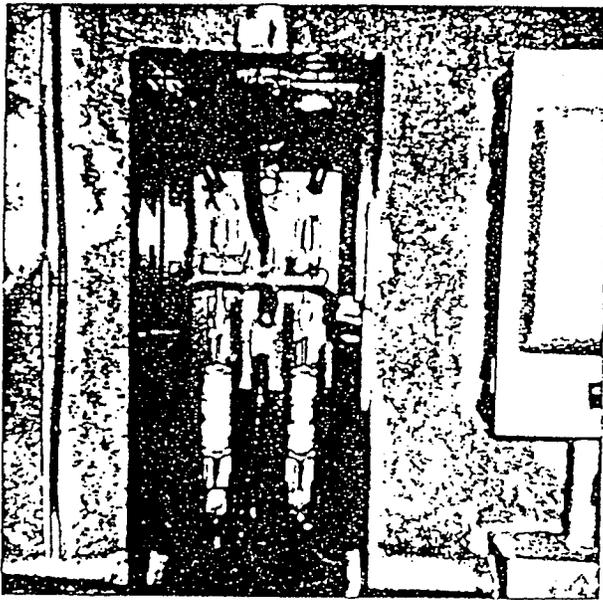
- A: Lighting Transformer
 - B: Emergency Lighting Transformer
 - C: South East Pylon, LS6 - 4 samples
 - D: South East Pylon, LS7 *included above.*
 - E: Caterpillar Gate House, 11M
 - F: South West Pylon, Phone
 - G: South West Pylon, Oakem
 - H: West Abutment Shaft J.B. (To Pumphouse on Hill)
 - I: Entrance Gate Upper
 - J: Emergency Valve Chamber, Sensor Control Wiring
 - K: Emergency Valve Chamber, Packing
 - L: Conduit Control House, Heater
- sample large conduit*



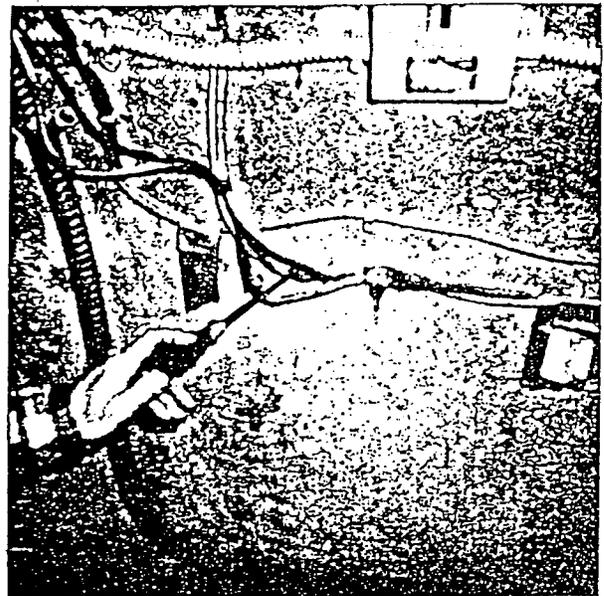
A LIGHTING TRANSFORMER



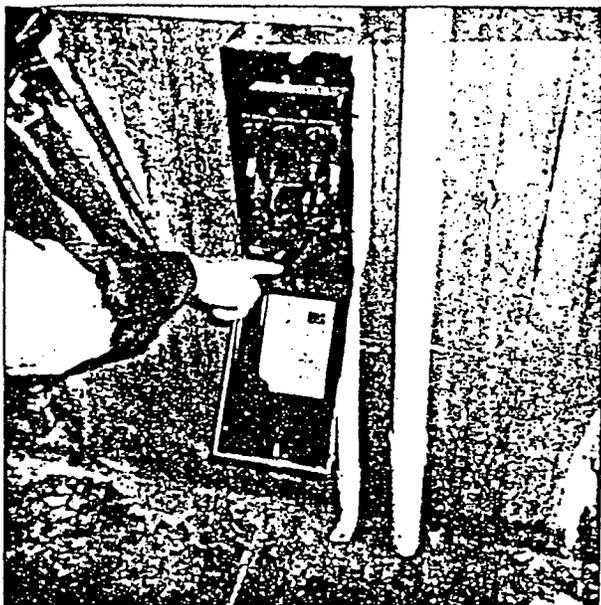
B - EMERGENCY LIGHTING TRANSFORMER



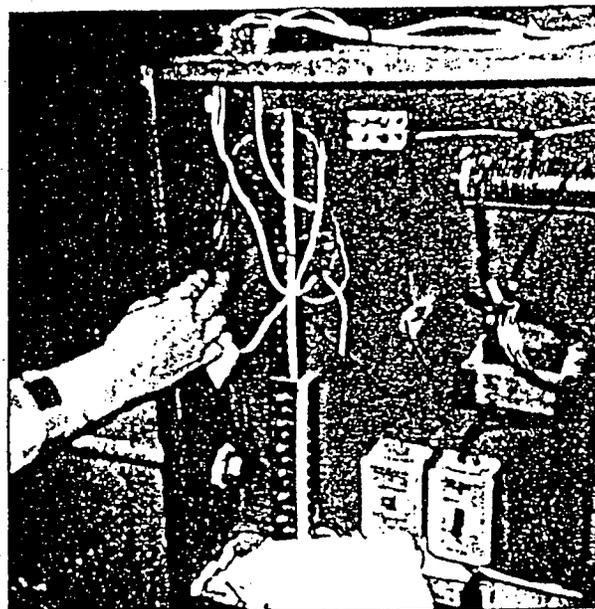
C - LSG



D - LS7



E - CAT GATE HOUSE 11 M



F - SOUTH WEST Pylon
PHONE



G - South West Pylon
OAKEM



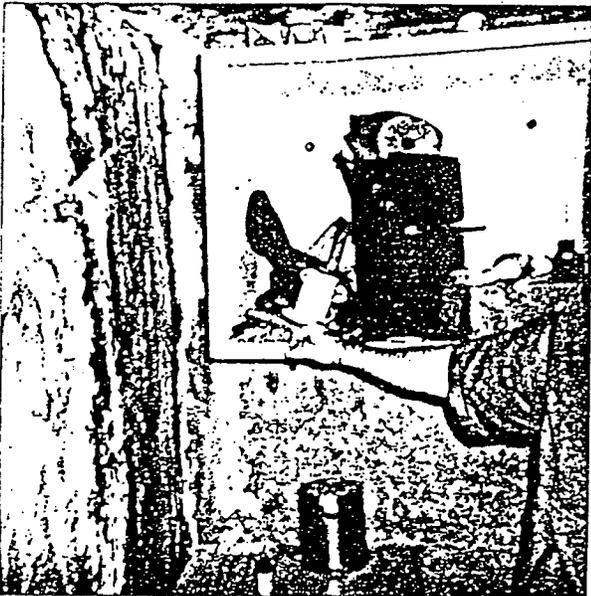
H - WEST ABUTMENT SHAFT
JOB (TO PUMPHOUSE ON HILL)
sample for pb, lead sheath cable
multi conductor.



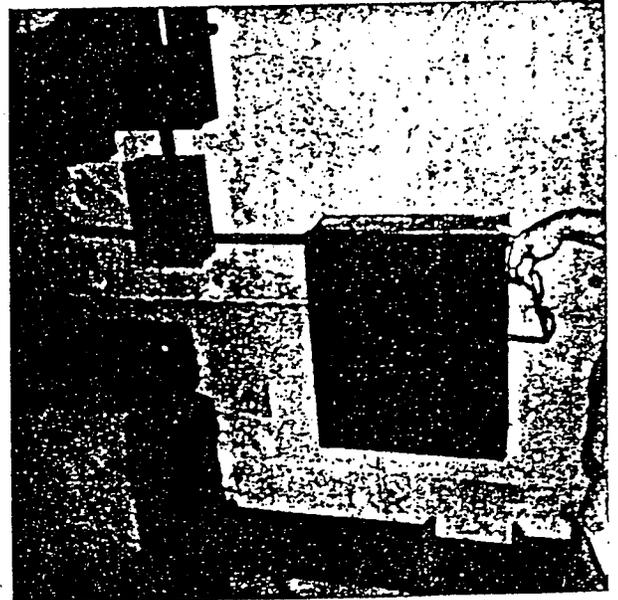
I - UPPER ENTRANCE GATE
lead shield cable
pb



J - EMERGENCY Valve
Chamber



K - EMERGENCY Valve
Chamber PACKING
Acm?



L - CONDUIT CONTROL
Hose Heater

APPENDIX C
LABORATORY REPORTS

LABORATORY REPORT

Report No.: 990514
Project Number: 99LA018
External No.: MORRIS DAM

PAHELIA MANNING
LOS ANGELES COUNTY DEPT OF PUBLIC WORKS
900 SOUTH FRENONT
ALHAMBRA CA 91803

Date Received: 27-OCT-98
Date Completed: 03-NOV-98
Date Sent: 03-NOV-98
Page 1 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (26) / Separable Layers (29)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
1-1 (169651)	GRAY CEMENT	COMPOSITE	BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
1-2 (169652)	GRAY CEMENT	COMPOSITE	BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
1-3 (169653)	GRAY CEMENT	COMPOSITE	BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
1-4 (169654)	GRAY CEMENT	COMPOSITE	BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
1-5 (169655)	GRAY CEMENT	COMPOSITE	BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
2-1 (ashed) (169656)	GRAY PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
2-2 (ashed) (169657)	GRAY PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
2-3 (ashed) (169658)	GRAY PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
3-1 (ashed) (169659)	GRAY W/ WHITE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	

10771 Noel St., Los Alamitos, CA 90720 714/220-3922 FAX 714/220-2081 e-mail hsa@earthlink.net

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (26) / Separable Layers (29)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
3-2 (ashed) (169660)	BEIGE W/ WHITE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
3-3 (ashed) (169661)	BEIGE W/ WHITE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
4-1 (ashed) (169662)	BLACK TAR	COMPOSITE	BELOW LIMIT OF DETECTION	
4-2 (ashed) (169663)	BLACK TAR	COMPOSITE	BELOW LIMIT OF DETECTION	
4-3 (ashed) (169664)	BLACK TAR	COMPOSITE	BELOW LIMIT OF DETECTION	
5-1 (ashed) (169665)	GRAY PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
5-2 (ashed) (169666)	WHITE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
5-3 (ashed) (169667)	WHITE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
6-1 (ashed) (169668)	WHITE W/ BEIGE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	

LABORATORY REPORT

Report No.: 990514

Page 3 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (26) / Separable Layers (29)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
Sampled) (9669)	WHITE W/ BEIGE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
Sampled) (9670)	BEIGE PUTTY	COMPOSITE	BELOW LIMIT OF DETECTION	
Sampled) (9671)	TAN W/ GOLD VINYL FLOOR TILE W/ MASTIC	1. TILE: 98 % 2. MASTIC: 2 %	BELOW LIMIT OF DETECTION * BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
Sampled) (9672)	BEIGE W/ GOLD VINYL FLOOR TILE W/ MASTIC	1. TILE: 98 % 2. MASTIC: 2 %	BELOW LIMIT OF DETECTION * BELOW LIMIT OF DETECTION	CELLULOSE : 1 %
Sampled) (9673)	TAN W/ GOLD VINYL FLOOR TILE W/ MASTIC	1. TILE: 98 % 2. MASTIC: 2 %	BELOW LIMIT OF DETECTION * BELOW LIMIT OF DETECTION	CELLULOSE : <1 %
Sampled) (9674)	GRAY TAR	COMPOSITE	CHRYSOTILE : 15 %	

Analysis of floor tiles by EPA 600/R-93/116 may produce false negative results. HSA recommends utilizing an alternative method such as transmission electron microscopy.

LABORATORY REPORT

Report No.: 990514

Page 4 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (26) / Separable Layers (29)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
2 (shed) 39675)	GRAY TAR	COMPOSITE	CHRYSOTILE : 15 %	
3 (shed) 69676)	GRAY TAR	COMPOSITE	CHRYSOTILE : 20 %	

Remarks : Sample(s) and sampling data as provided
by BOB WEITZEL

Analyst : JHB / DRB

Reviewed by: Donald R. Bissing
Asbestos PLM Supervisor, Donald R. Bissing, PhD

NIHA ELLAP Accreditation No.: 10985
NIHA Accreditation No.: 172
California ELAP No.: 1406
IVLAP Accreditation No.: 101384

Technical Approval: Susan Rosenberg
Laboratory Director, Susan B. Rosenberg, CIH

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity

ASBESTOS BULK SAMPLE DATA SHEET

Client: PAROLA MANNING Project: MARRIS DAM
 Date: 10-27-98 Project Manager: MARK PINCKON Ind. Hyg.: B. WELTZER
 IISA Project No.: 926A018 Batch No.:

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)		Quantity square/linear footage	Lab Result
			F D	TSI SM		
169658	2-3	CRANK ROOM WINDOWS/ WINDOW PUTTY	F D	TSI SM		
		OLD CHLORINE HOUSE EAST WINDOW WINDOW PUTTY	F D	TSI SM		
659	3-1	OLD CHLORINE HOUSE SOUTH EAST WINDOW WINDOW PUTTY	F D	TSI SM		
		OLD CHLORINE HOUSE SOUTH WEST WINDOW WINDOW PUTTY	F D	TSI SM		
660	3-2	OLD CHLORINE HOUSE SOUTH WEST WINDOW WINDOW PUTTY	F D	TSI SM		
		OLD CHLORINE HOUSE SOUTH WEST WINDOW WINDOW PUTTY	F D	TSI SM		
661	3-3	OLD CHLORINE HOUSE SOUTH WEST WINDOW WINDOW PUTTY	F D	TSI SM		
		WINDOW WINDOW PUTTY	F D	TSI SM		
662	4-1	CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		
		CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		
663	4-2	CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		
		CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		
664	4-3	CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		
		CATERPILLAR ROOM, CATERPILLAR GARAGE/BLACK TAN	F D	TSI SM		

Conditions: F = Friable; NF = Non-friable; SD = Significantly Damaged > 10% surface damage; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surfacing Materials

Chain of Custody Record:

Released by: B. WELTZER Date: _____ Time: _____
 Received at Lab by: M. Welton Date: 10/27/98 Time: 3:15 pm

Notes:

ASBESTOS BULK SAMPLE DATA SHEET

IB Job No.: _____ HSA Project No.: 992A018 Batch No.: _____

Client: PANAMA MANURE Project: MORRIS DAM

Site: 15-27-98 Project Manager: HARK PINEA Ind. Hyg.: B WEITZEL

Circle One
Urgent = 4-8 hours
Priority = 24-48 hours
Routine = 3-5 days

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
69665	5-1	CATERPILLAR HOUSE, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
666	5-2	CATERPILLAR HOUSE, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
667	5-3	CATERPILLAR HOUSE, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
668	6-1	GENERATOR ROOM, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
669	6-2	GENERATOR ROOM, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
670	6-3	GENERATOR ROOM, WINDOW/ WINDOW PUTTY	F D G SD TSI SM		
671	7-1	OFFICE TRAILER FLOOR/ 12X12 TAN FLOOR TILES & BRICK MASONRY	F D G SD TSI SM		

Condition: F = Friable; NF = Non-Friable; SD = Significantly Damaged; >10% surface damage; D = Damaged <10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Material; SC = Spray On Coatings; SM = Surfacing Materials

Chain of Custody Record: _____

Notes: _____

Report No.: 990518

Page 3 of 3

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (21) / Separable Layers (21)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
15-1 (ashed) (169709)	BLACK FELT PAPER	COMPOSITE	BELOW LIMIT OF DETECTION	SYNTHETIC : <1 %
15-2 (ashed) (169710)	BLACK FELT PAPER	COMPOSITE	BELOW LIMIT OF DETECTION	SYNTHETIC : <1 %
15-3 (ashed) (169711)	BLACK FELT PAPER	COMPOSITE	BELOW LIMIT OF DETECTION	SYNTHETIC : <1 %

Remarks : Sample(s) and sampling data as provided
by BOB WEITZEL

Analyst : JMB / DRB

Reviewed By:

Donald R. Bissing
Asbestos PLM Supervisor, Donald R. Bissing, PhD

AIHA ELLAP Accreditation No.: 10985
AIHA Accreditation No.: 172
California ELAP No.: 1406
NVLAP Accreditation No.: 101384

Technical Approval:

Susan Rosenberg
Laboratory Director, Susan B. Rosenberg, CIH

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

Client: PAMALA MANNING Project: MORGAN DAM
 Date: 10-28-98 Project Manager: HANK PINKON Ind. Hyg.: B. WEITZ
 HSA Project No.: 99LA018 Batch No.:

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
169691	9-1	HILL ON NORTH SIDE OF DAM OPERATORS HOUSE/CEMENT	F (NF) SD (M) SC D (G)		
692	9-2	HILL ON NORTH SIDE OF DAM OPERATORS HOUSE/CEMENT	F (NF) SD (M) SC D (G)		
693	9-3	HILL ON NORTH SIDE OF DAM OPERATORS HOUSE/CEMENT	F (NF) SD (M) SC D (G)		
694	10-1	DOMESTIC WATER TANK ROOM/ WINDOWS/WINDOW PUTTY	F (NF) SD (M) SC D (G)		
695	10-2	DOMESTIC WATER TANK ROOM/ WINDOWS/WINDOW PUTTY	F (NF) SD (M) SC D (G)		
696	10-3	DOMESTIC WATER TANK ROOM/ WINDOWS/WINDOW PUTTY	F (NF) SD (M) SC D (G)		
697	11-1	DAM OPERATORS HOUSE MASTER BED ROOM SOUTH WALL PLASTER	F (NF) SD (M) SC D (G)		

Condition: F = Friable; NF = Non-Friable; SD = Significantly Damaged; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surface Material

Chain of Custody Record: _____
 Released by: B. Weitz Date: 10/28/98 Time: 12:15 pm
 Received at Lab by: M. Belliz Date: 10/28/98 Time: 12:15 pm

Notes:

ASBESTOS BULK SAMPLE DATA SHEET

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

Health Science Associates
 LAB Job No.:

IISA Project No.: 99LA018 Batch No.: _____
 Client: PAMALA MANNING Project: MORRIS DAM
 Date: 10-28-98 Project Manager: HANK PINERA Ind. Hyg.: B. WEITZEL

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)		Quantity square/linear footage	Lab Result
			Condition	Type		
169698	11-2	DAM OPERATIONS HOUSE HALLWAY	F	TSI		
699	11-3	MONTH WALL/ PLASTER	D	M		
700	12-1	DAM OPERATIONS HOUSE KITCHEN	G	SM		
701	12-2	WEST WALL/ PLASTER	F	TSI		
702	12-3	DAM OPERATIONS HOUSE ATTIC	D	M		
703	13-1	BROWN INSULATION	G	SM		
704	13-2	DAM OPERATIONS HOUSE ATTIC	F	TSI		
		BROWN INSULATION	D	M		
		DAM OPERATIONS HOUSE ATTIC	F	TSI		
		BROWN INSULATION	D	M		
		EXTERIOR, DAM OPERATIONS HOUSE	F	TSI		
		KITCHEN WINDOW/ WINDOW PUTTY	D	M		
		EXTERIOR, DAM OPERATIONS HOUSE	F	TSI		
		KITCHEN WINDOW/ WINDOW PUTTY	D	M		

Legend: F = Frangible; NF = Non-Frangible; SD = Significantly Damaged; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coating; SM = Surfacing Material

Chain of Custody Record:
 Released by: B. Weitzel Date: _____ Time: _____
 Received at Lab by: M. Felix Date: 10/28/98 Time: 12:15 PM

Notes: _____

ASBESTOS BULK SAMPLE DATA SHEET

LAB Job No.:

HSA Project No.: 996018

Batch No.:

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 5-5 days

Client: PAMALA MANNING

Project: MORRIS DAM

Date: 10-28-98

Project Manager: HANK PINGOTA

Ind. Hyg.: B. WEITZEL

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)		Quantity square/linear footage	Lab Result
			F NF SD G	TSI SM SC		
169 705 en	13-3	EXTENSION, DAM OPERATIONS HOUSE KITCHEN WINDOW/WINDOW PART	F NF SD G	TSI SM SC		
706 en	14-1	EXTENSION, DAM OPERATIONS HOUSE NEARBY / STUCCO	F NF SD G	TSI SM SC		
707 en	14-2	EXTENSION, DAM OPERATIONS HOUSE SOUTH / STUCCO	F NF SD G	TSI SM SC		
708 en	14-3	EXTENSION, DAM OPERATIONS HOUSE WEST / STUCCO	F NF SD G	TSI SM SC		
709 en	15-1	ROOF, DAM OPERATIONS HOUSE FELT PAPER	F NF SD G	TSI SM SC		
710 en	15-2	ROOF, DAM OPERATIONS HOUSE FELT PAPER	F NF SD G	TSI SM SC		
711 en	15-3	ROOF, DAM OPERATIONS HOUSE FELT PAPER	F NF SD G	TSI SM SC		

Conditions: F = Friable; NF = Non-friable; SD = Significantly Damaged; D = Damaged < 10% surface damage; O = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surfacing Material

Chain of Custody Record:

Released by: B. WEITZEL Date: 10/28/98 Time: 12:15 PM
 Received at Lab by: M. Weitzel Date: 10/28/98 Time: 12:15 PM

Notes:

LABORATORY REPORT

Report No.: 992237
Project Number: 99LA018
Internal No.: MORRIS DAM

PAMELA MANNING
LOS ANGELES COUNTY DEPT OF PUBLIC WORKS
900 SOUTH FREMONT
ALHAMBRA CA 91803

Date Received: 19-FEB-99
Date Completed: 22-FEB-99
Date Sent: 22-FEB-99
Page 1 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (25) / Separable Layers (25)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
9LA018-0217-16-1 (ashed) (182406)	BEIGE/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-16-2 (ashed) (182407)	BEIGE/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-17-1 (ashed) (182408)	BROWN/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-17-2 (ashed) (182409)	BROWN/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-18-1 (ashed) (182410)	BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-18-2 (ashed) (182411)	BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
9LA018-0217-19-1 (ashed) (182412)	RED/WHITE INSULATION	COMPOSITE	CHRYSTILE : 30 %	
9LA018-0217-19-2 (ashed) (182413)	RED/WHITE INSULATION	COMPOSITE	CHRYSTILE : 30 %	

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LABORATORY REPORT

Report No.: 992237

Page 2 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (25) / Separable Layers (25)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
99LA018-0217-19-3 (ashed) (182414)	BLACK/BEIGE INSULATION	COMPOSITE	CHRYSOTILE : 25 %	
99LA018-0217-19-4 (ashed) (182415)	GRAY/TAN INSULATION	COMPOSITE	CHRYSOTILE : 60 %	
99LA018-0217-20-1 (ashed) (182416)	BROWN INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	FIBROUS GLASS : <1 %
99LA018-0217-20-2 (ashed) (182417)	BROWN INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	FIBROUS GLASS : <1 %
99LA018-0217-21-1 (ashed) (182418)	GRAY/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0217-21-2 (ashed) (182419)	GRAY/BLACK INSULATION	COMPOSITE	CHRYSOTILE : <1 %	
99LA018-0218-23-1 (ashed) (182420)	BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-23-2 (ashed) (182421)	BLACK/GRAY INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-24-1 (ashed) (182422)	BLACK PACKING MATERIAL	COMPOSITE	CHRYSOTILE : 80 %	

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LABORATORY REPORT

Report No.: 992237

Page 3 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE

Sample Count (25) / Separable Layers (25)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
99LA018-0218-24-2 (ashed) (182423)	BLACK/GRAY PACKING MATERIAL	COMPOSITE	CHRYSOTILE : 80 %	
99LA018-0218-24-3 (ashed) (182424)	GRAY PACKING MATERIAL	COMPOSITE	CHRYSOTILE : 80 %	
99LA018-0218-25-1 (ashed) (182425)	BLACK/SILVER FAN BLADES	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-26-1 (ashed) (182426)	BLACK/GRAY INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-26-2 (ashed) (182427)	BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-27-1 (ashed) (182428)	BROWN/BLACK INSULATION	COMPOSITE	BELOW LIMIT OF DETECTION	

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LABORATORY REPORT

Report No.: 992237

Page 4 of 4

Analytical Method: EPA 600/R-93-116

RESULTS TABLE
Sample Count (25) / Separable Layers (25)

Sample No.	Description	Sample Homogeneity	Asbestos Fibers	Nonasbestos Fibers
99LA018-0218-28-1 (ashed) (182429)	RED GASKET	COMPOSITE	BELOW LIMIT OF DETECTION	
99LA018-0218-29-1 (ashed) (182430)	RED GASKET	COMPOSITE	BELOW LIMIT OF DETECTION	

ANALYST'S NOTE: METAL CONDUCTORS IN ALL SAMPLES WHERE PRESENT WERE EXCLUDED FROM ANALYSIS.

Remarks : Sample(s) and sampling data as provided
by HANK PINEDA

Analyst : JMB / DRB

Reviewed by: Donald R Bissing
Asbestos PLM Supervisor, Donald R. Bissing, PhD

AIHA ELLAP Accreditation No.: 10985
AIHA Accreditation No.: 172
California ELAP No.: 1406
NVLAP Accreditation No.: 101384

Technical Approval: Jaime Steedman-Lyde
Laboratory Director, Jaime Steedman-Lyde

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Circle One
Urgent = 4-8 hours
Priority = 24-48 hours
Routine = 3-5 days

AB Job No.: 500 K144 IISA Project No.: 771018 Batch No.: (05)

Client: 2/17/99 Project Manager: Hillman Project: Express Morris Park

Ind. Hyg.: Hillman

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)		Quantity square/linear footage	Lab Result
			F	D		
182400	99LA018-0217	South East Pylon L57	(NF)	(M)		
		Braided wire white location D	SD	SC		
7	16-1	South East Pylon L57	(NF)	(M)		
		Braided wire, L-D	SD	SC		
8	17-1	Gate Pillar Gate House	(NF)	(M)		
		11M, L-E	SD	SC		
9	17-2	Gate Pillar Gate House	(NF)	(M)		
		11M, L-E	SD	SC		
182410	18-1	South East Pylon L56	(NF)	(M)		
		3/0 wire L-C, lead shielded	SD	SC		
1	18-2	South East Pylon L58	(NF)	(M)		
		3/0 wire - L-C, lead shielded	SD	SC		
2	19-1	South west pylon - phone wiring - roof - Encased in multi conductor braided cable, L-F	(NF)	(M)		
			SD	SC		

Conditions: F = Friable; NP = Non-Friable; SD = Significantly Damaged >10% surface damage; D = Damaged <10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coating; SM = Surfacing Material

Chain of Custody Records:
Released by: Thurk Date: 2/17/99 Time: 1:500
Received at Lab by: S. Cleveland Date: 2/19/99 Time: 2:50

Notes: 17-1 & 17-2 Braided Brown wire
Note Return Bulk Samples To Hillman

Circle One
Urgent = 4-8 hours
Priority = 24-48 hours
Routine = 3-5 days

Client: Soo KIM Project: Lasquec Morris Dam
 Date: 2/17/97 Project Manager: H.P. Ind. Hyg.: H. Pinel
 IISA Project No.: 99LA018 Batch No.:

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
182413	99LA018-0217	South west pylon - phone wiring - Red. Encased in multi conductor Braided cable L-F	F (NF) SD (M) SC L-FG		
4	19-3	South west pylon - multi conductor Braided cable L-F	F (NF) SD (M) SC G		
5	19-4	South west pylon multi conductor Braided cable L-F	F (NF) SD (M) SC G		
6	20-1	South west pylon OAKEM - Brown L-6	F (NF) SD (M) SC G		
7	20-2	South west pylon OAKEM - Brown L-6	F (NF) SD (M) SC G		
8	21-11	West Abutment shaft (To pump house) 210 conductors for wire with lead metal covering.	F (NF) SD (M) SC G		
9		L-H	F (NF) SD (M) SC G		

Conditions: F = Friable; NF = Non-friable; SD = Significantly Damaged > 10% surface damage; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surfacing Materials

Chain of Custody Record:
 Released by: [Signature] Date: 2/17/97 Time: 1:50 PM
 Received at Lab by: [Signature] Date: [] Time: 3:00 PM
 Notes: 1978 19-2 - Several types of this wiring within complexity
19-3 & 19-4 - Several types

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

AB Job No.: _____ HSA Project No.: 99LA018 Batch No.: _____
 Client: Sea Kim Project: Las Vegas / Mexico Dr
 Date: 2/17/97 Project Manager: HP Ind. Hyg.: HP

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
182419	21-2	West Abatement shaft (to pump house) 3/0 conductors were with lead metal & wiring & SCF	NP SD SM		
	22-1	Entrance Gate UPPER - L-I (No sample collected per LACAPPUS - similar wiring samples 19-1, 2, 3, 4. Southwest pylon - phase	NP SD SM SC		
182420	0218-23-1	Emergency Valve Chamber / Spans. R. Control wiring - L-I (outside)	NP SD SM SC		
	2B-2	Emergency Valve Chamber / sensor. Control wiring L-I (inside)	NP SD SM SC		

Conditions: F = Friable; NP = Non-friable; SD = Significantly Damaged > 10% surface damage; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coating; SM = Surfacing Materials

Chain of Custody Records

Released by: [Signature] Date: 2/18/97 Time: 1500
 Received at Lab by: [Signature] Date: 2/18/97 Time: 1500

Notes:

ADDITIOUS BULK SAMPLE DATA SHEET

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

Science Associates

Client: Soo Kim IISA Project No.: SP44018 Batch No.: _____
 Date: 2/10/77 Project Manager: H.P. Project: Casepini/arrals pm
 Ind. Hyg.: H.P.

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
182422	0218 - 24-1	Emergency valve	F (NF) SD (M) SC D G		
		Chamber packing			
182423	24-2	1/2 inch square, black L-K	F (NF) SD (M) SC D G		
		Emergency valve			
182424	24-3	1/4 inch square, black L-K	F (NF) SD (M) SC D G		
		Chamber packing, white L-K			
↓ 5	25-1	Conduit Control	F (NF) SD (M) SC D G		
		House, Heater unit			
		Fan Blades	F (NF) SD (M) SC D G		

Condition: F = Frangible; NF = Non-frangible; SD = Significantly Damaged > 10% surface damage; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surfacing Materials

Chain of Custody Record

Released by: [Signature] Date: 2/10/77 Time: 1:00
 Received at Lab by: [Signature] Date: 2/10/77 Time: 3:00 PM

Notes:

ASBESTOS BULK SAMPLE DATA SHEET

Circle One
 Urgent = 4-8 hours
 Priority = 24-48 hours
 Routine = 3-5 days

Client: See KIM IISA Project No.: 99LA018 Batch No.: _____
 Date: 2/18/97 Project Manager: H.P. Ind. Hyg.: H.P.
 Project: Casepini/IM.

Auto Sample Number	Submitter Number	Location/Description	Condition/Type (circle one)	Quantity square/linear footage	Lab Result
182426	26-1	Emergency lighting	F (NF) TSI D (SD) (M) SM G SC		
		Transformer wiring			
		Emergency lighting	F (NF) TSI D (SD) (M) SM G SC		
		Transformer wiring			
7	26-2	Hoist wiring, brown	F (NF) TSI D (SD) (M) SM G SC		
		Braided wire			
8	27-1	Value #4, Gasket	F (NF) TSI D (SD) (M) SM G SC		
		Red			
182430	28-1	Pipe Gasket wire	F (NF) TSI D (SD) (M) SM G SC		
		Value #384, Red			
		Intake From Lake	F (NF) TSI D (SD) (M) SM G SC		
9	29-1	PIPE assembly - For high pressure pumps to upper tank	F (NF) TSI D (SD) (M) SM G SC		

Condition: F = Friable; NF = Non-friable; SD = Significantly Damaged > 10% surface damage; D = Damaged < 10% surface damage; G = Good Condition; Type: TSI = Thermal System Insulation; M = Miscellaneous Materials; SC = Spray On Coatings; SM = Surfacing Materials

Chain of Custody Receipt:

Released by: [Signature] Date: 2/17/97 Time: 1:50 P
 Received at Lab by: [Signature] Date: 2/17/97 Time: 3:00 P

Notes:

LABORATORY REPORT

Report No.: 990474
Project Number: 99LA018
External No.: MORRIS DAM

PAMELA MANNING
LOS ANGELES COUNTY DEPT OF PUBLIC WORKS
900 SOUTH FREMONT
ALHAMBRA CA 91803

Date Received : 26-OCT-98
Date Completed : 09-NOV-98
Date Sent : 10-NOV-98
Page / 1 of 3

Sample Description : 38- PAINT CHIPS

Method of Analysis : Inductively Coupled Argon Plasma, Atomic Emission Spectroscopy (EPA 6010)

Method of Digestion : Microwave (EPA 3051 - modified)

Sample Number	Submitter Number	Location	Lead (WT%)
169335	01PC	METAL GATE/ENT DAM	5.8
169336	02PC	METAL CHAIN LINK FNC	0.069
169337	03PC	ENTRANCE/ROAD	0.047
169338	04PC	METAL POST/FENCE	0.29
169339	05PC	METAL RAILING/FRONT	<0.01
169340	06PC	METAL RAIL ON TOP	0.017
169341	07PC	METAL VENT PIPE	0.29
169342	08PC	W-SIDE OF SPILL PIPE	0.047
169343	09PC	W-SPILLWAY/ELECT BOX	0.025
169344	10PC	BARREL GATE HANDLES	5.3
169345	11PC	SPILLWAY VALVE HOUSE	3.4
169346	12PC	SPILL DIAMOND PLATE	11
169347	13PC	FLAG POST	2.2
169348	14PC	RAIL/LOWER SPILLWAY	0.07
169349	15PC	SPILL BARRIAL GATE	<0.01
169350	16PC	N-W STORAGE RM/DOOR	3.9
169351	17PC	N-W STORG RM SHELVES	2.6

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LABORATORY REPORT

Report No.: 990474

Page / 2 of 3

Sample Description : 38- PAINT CHIPS

Method of Analysis : Inductively Coupled Argon Plasma, Atomic Emission Spectroscopy (EPA 6010)

Method of Digestion : Microwave (EPA 3051 - modified)

Sample Number	Submitter Number	Location	Lead (WT%)
169352	18PC	S-W CONUNICATION RM	0.20
169353	19PC	S-W CUMM RM/ELEC BOX	0.45
169354	20PC	OUTSD S-W COMM RM	<0.01
169355	21PC	METAL PUMP RAIL	41
169356	22PC	GATE MOTORS	11
169357	23PC	OUTLET/HOIST	0.044
169358	24PC	MAR BASKET	<0.02
169359	25PC	OUTLET METAL PLATE	1.5
169360	26PC	CATER HSE WEST DOOR	9.8
169361	27PC	CATER HOUS HAND RAIL	0.029
169362	28PC	CATER HOUSE LINES	0.32
169363	29PC	CATER HSE METAL BEAM	0.015
169364	30PC	N-E DAM CORNER VALVE	0.15
169365	31PC	N-E DAM VALVES HOUS	0.76
169366	32PC	S-E DAM ELEC RM	29
169367	33PC	S-E COMP RM/ELEC BOX	0.38
169368	34PC	COMP RM/DOOR	4.6

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LABORATORY REPORT

Report No.: 990474

Page / 3 of 3

Sample Description : 38- PAINT CHIPS

Method of Analysis : Inductively Coupled Argon Plasma, Atomic Emission Spectroscopy (EPA 6010)

Method of Digestion : Microwave (EPA 3051 - modified)

Sample Number	Submitter Number	Location	Lead (WT%)
169369	35PC	S-E TUNNEL/GATE	0.053
169370	36PC	S-E TUNNEL/ELEC COND	0.044
169371	37PC	S-E TUN/RAILING	0.015
169372	38PC	HOUSE ROLLUP DOOR	0.12
Detection Limit			0.01

This method requires 0.1 gm of sample material to achieve a detection limit = 0.01 WT%. Insufficient sample material will result in higher detection limits.

The Consumer Products Safety Commission standard level for lead-based paint is more than 0.06% Lead Metal by weight. The Housing and Urban Development (HUD) Guidelines define lead-based paint as containing lead at or above 0.5% or 1.0 mg/cm².

Remarks : Sample(s) and sampling data as provided
by BOB WEITZEL

Analyst : TZ

Ref : TZ_0474

California ELAP No.: 1406
AIHA Accreditation No.: 172
NVLAP Accreditation No.: 101384
AIHA ELLAP Accreditation No.: 10985
LACSD Lab No.: 10125

Reviewed by: _____

Susan B. Rosenberg

Technical Approval: _____

Laboratory Director, Susan B. Rosenberg, CIA

10771 Noel St., Los Alamitos, CA 90720 714/220-3922 FAX 714/220-2081 e-mail hsa@earthlink.net

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HSA Project No.: 98LA018 Project: MORRIS DAM

Client: PAMALA MANNING Batch No.: _____

Circle One
 Rush = 4 Hours
 Priority = 24 Hours
Routine = 5 Days

Date: 10-26-98 Project Mgr.: HANK PINKO Ind. Hyg.: B. WITZEL

Sample No.	Media	Location/Description	Notes/Instructions
335 01PC	PAINT CHIP	METAL GATE, ENTRANCE TO DAM/ GREY PAINT	0.099 2
336 02PC		METAL CHAIN LINK FENCE TO ENTRANCE/ SILVER PAINT	0.100 7
337 03PC		ENTRANCE PAINT ON ROAD/ YELLOW PAINT	0.099 4
338 04PC		ENTRANCE METAL POST FOR FENCE/ GREY PAINT	0.100 5
339 05PC		METAL RAILING IN FRONT OF DAM OPERATIONS HOUSE/ GREY PAINT	0.100 6
340 06PC		METAL RAILING ON TOP OF DAM/ YELLOW PAINT	0.099 7
341 07PC		METAL VENT PIPE ON TOP OF SPILLWAY/ BROWN PAINT	0.102 8
342 08PC		WEST SIDE OF SPILLWAY PIPE/ TAN PAINT	0.073 9
343 09PC		WEST SPILLWAY ELECTRICAL BOX/ TAN PAINT	0.096 10
344 10PC		SPILLWAY BARREL GATE HANDLE/ BROWN PAINT	0.099 11

Laboratory Reporting Units: _____ Wipe in $\mu\text{g}/\text{ft}^2$ _____ Soil in ppm _____ Paint Chip in WT%
 _____ Waste Water in ppm _____ Drinking Water in ppb _____ Paint Chip in mg/cm^2
 _____ Lead Waste in TTLC, STLC, TCLP (Circle all that apply)

Special Instructions to Laboratory:

Custody Record: Released By: B. WITZEL
(Signature)

Received By: (Signature)

Time/Date: 10/26/98 4:00 PM
11/2/98 3:10 PM

Circle One
 Rush = 4 Hours
 Priority = 24 Hours
 Routine = 5 Days

HSA Project No.: 99LAC18 Project: MORRIS DAM

Client: PAMALA MANNING Batch No.:

Date: 10-26-98 Project Mgr.: HANK PINEDA Ind.Hyg.: B. WELCH

Sample No.	Media	Location/Description	Notes/Instructions
345 11PC	PAINT CHIP	SPILLWAY VALVE HOUSING/ BARREL GATE/TAN PAINT	0.102 12
346 12PC		SPILLWAY DIAMOND PLATING/ TAN PAINT	0.099 3
347 13PC		FLAG POST METAL/ SILVER PAINT	0.102 4
348 14PC		BAILING LOWER SPILLWAY/ YELLOW PAINT	0.101 5
349 15PC		SPILLWAY BARREL GATE/ TAN PAINT	0.100 6
350 16PC		NORTH WEST STORAGE ROOM DOOR METAL/TAN PAINT	0.104 7
351 17PC		NORTH WEST STORAGE ROOM SHUFLS/WHITE PAINT	0.099 8
352 18PC		SOUTH WEST COMMUNICATION ROOM FLOOR, WOOD/GRAY PAINT	0.103 9
353 19PC		SOUTH WEST COMMUNICATION ROOM ELECTRICAL BOX/BLACK PAINT	0.100 10
354 20PC		OUTSIDE SOUTH WEST COMMUNICATION ROOM, FIRE EXTINGUISHER/RED PAINT	0.102 11

Laboratory Reporting Units: Wipe in µg/ft² Soil in ppm Paint Chip in WT%
 Waste Water in ppm Drinking Water in ppb Paint Chip in mg/cm²
 Lead Waste in TTLC, STLC, TCLP (Circle all that apply)

Special Instructions to Laboratory:

Custody Record: Released By: B. Welch Received By: M. Lewis Time/Date: 10/26/98

HSA Project No.: 99LA018 Project: MORRIS DAM

Client: PAMALA MANNING Batch No: _____

Circle One
 Rush = 4 Hours
 Priority = 24 Hours
 Routine = 5 Days

Date: 10-26-98 Project Mgr.: HANK PINEDA Ind. Hyg.: B. WELITZ

Sample No.	Media	Location/Description	Notes/Instructions
355 21PC	PAINT CHIP	WATER SUPPLY OUTLET, METAL	0.104 12
		RAMP RAIL/ GRAY PAINT	
356 22PC		WATER SUPPLY OUTLET, GATE	0.090 1
		MOTORS/ TAN PAINT	
357 23PC		WATER SUPPLY OUTLET, HOIST/	0.099 2
		YELLOW PAINT	
358 24PC		WATER SUPPLY OUTLET, MAN	0.060 3
		BASKET/ YELLOW PAINT	
359 25PC		WATER SUPPLY OUTLET METAL	0.104 4
		PLATE BY HOIST/ TAN PAINT	
360 26PC		CATERPILLAR HOUSE WEST DOOR/	0.101 5
	TAN PAINT		
361 27PC	CATERPILLAR HOUSE HAND RAILS/	0.100 6	
	YELLOW PAINT		
362 28PC	CATERPILLAR HOUSE ELECTRICAL	0.104 7	
	LINES/ TAN PAINT	62DU 0.102 8	
		62SP 0.099 9	
363 29PC	CATERPILLAR HOUSE METAL	0.102 10	
	BEANS/ TAN PAINT		
364 30PC		NORTH EAST OF DAM CONCRETE	0.104 11
		VALVES/ TAN PAINT	

Laboratory Reporting Units: _____ Wipe in µg/ft² _____ Soil in ppm _____ Paint Chip in WT%
 _____ Waste Water in ppm _____ Drinking Water in ppb _____ Paint Chip in mg/cm²
 _____ Lead Waste in TTLC, STLC, TCLP (Circle all that apply)

Special Instructions to Laboratory:

Custody Record:

Released By: B. WELITZ
(Signature)

Received By: M. Stelzig
(Signature)

Time/Date: 10/26/98

HSA Project No.: 994A018 Project: MORRIS DAM

Client: PADMA MANNING Batch No: _____

Circle One
 Rush = 4 Hours
 Priority = 24 Hours
Routine = 5 Days

Date: 10-26-98 Project Mgr.: HANK PINKOP Ind.Hyg.: B. Wilson

Sample No.	Media	Location/Description	Notes/Instructions
365 31 PC	PAINT CHIP	NORTH EAST CORNER OF DAM	0.103 12
		VALVE HOUSING/GRAY PAINT	
366 32 PC		SOUTH EAST OF DAM ELECTRICAL ROOM, ELECTRICAL BOX/SILVER PAINT	0.102 1
367 33 PC		SOUTH EAST COMPRESSOR ROOM/ ELECTRICAL BOX/ TAN PAINT	0.099 2
368 34 PC		COMPRESSOR ROOM DOOR/ TAN PAINT	0.102 4
369 35 PC		SOUTH EAST TUNNEL GATE MECHANICAL TAN PAINT	0.102 5
370 36 PC		SOUTH EAST TUNNEL ELECTRICAL CONDUIT/ TAN PAINT	0.103 7
371 37 PC		SOUTH EAST TUNNEL RAILING AND TEST EQUIPMENT/ TAN PAINT	0.099 9
372 38 PC		CATERPILLAR HOUSE ROLLUP DOOR/ TAN PAINT	0.101 10

Laboratory Reporting Units: _____ Wipe in $\mu\text{g}/\text{ft}^2$ _____ Soil in ppm _____ Paint Chip in WT%
 _____ Waste Water in ppm _____ Drinking Water in ppb _____ Paint Chip in mg/cm^2
 _____ Lead Waste in TTLC, STLC, TCLP (Circle all that apply)

Special Instructions to Laboratory:

Custody Record: _____ Released By: B. Wilson
(Signature)

Received By: (Signature) Time/Date: 10/26/98

LABORATORY REPORT

Report No.: 990531
 Project Number: 99LA018
 Internal No.: MORRIS DAM

PAMELA MANNING
 LOS ANGELES COUNTY DEPT OF PUBLIC WORKS
 900 SOUTH FREMONT
 ALHAMBRA CA 91803

Date Received : 27-OCT-98
 Date Completed : 04-NOV-98
 Date Sent : 05-NOV-98
 Page # 1 of 3

Sample Description : 45- PAINT CHIPS

Method of Analysis : Inductively Coupled Argon Plasma, Atomic Emission Spectroscopy (EPA 6010)

Method of Digestion : Microwave (EPA 3051 - modified)

Sample Number	Submitter Number	Location	Lead (WT%)
9790	39PC	TUNNEL ENT/GATE	0.032
9791	40PC	TUNNEL/ELECTRIC BOX	13
9792	41PC	TUNNEL/HAND RAIL	0.052
9793	42PC	TUNL/METAL TRACK	18
9794	43PC	PUMP RM/WATER LINES	25
9795	44PC	PUMP RM/ELEC SWITCH	1.2
9796	45PC	PUMP RM/VALVE #1 HDL	0.11
9797	46PC	PUMP RM/VLV #1 HOUS	2.3
9798	47PC	PUMP RM VLV #4/HOUS	3.9
9799	48PC	PLATFORM ABOVE VLV 3	0.16
9800	49PC	PUMP RM/PUMPS-HOUS	0.20
9801	50PC	PUMP #1/BRACKET	0.021
9802	51PC	VALVE #1/HOUSING	15
9803	52PC	PUMP RM/TANK	0.30
9804	53PC	VALVE/HOUSING	1.9
9805	54PC	STAIRS TO CRANE RM	0.18
9806	55PC	STAIR HAND RAILS	0.014

10771 Noel St., Los Alamitos, CA 90720 714/220-3922 FAX 714/220-2081 e-mail hsa@earthlink.net

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